THE LANCET.

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Treatise on the Cholera Asphyxia, or Epidemic Cholera, as it appeared in Asia, and more recently in Europe. By Geo. Hamilton Bell, F.R.C.S.E., late Residency Surgeon, Tanjore. London: Smith, Elder, and Co. 1831. 8vo. pp. 150.

It is an old but most veracious adage, that "It is a bad wind which blows nobody good;" and, verily, although the next north-easter should bear us the cholera on its wings, printers and publishers have reason to rejoice at the very rumours of its advent. Paternoster-row is in an uproar. Waggon loads of MSS. pour in at one end, and carts full of tracts, treatises, and folios, issue from the other. The whole of these productions may, as usual, be arranged into three classes; the good, the bad, and a variety partaking of both. In a former Number we presented our readers with an analysis of an excellent specimen of the first class of publications; of the second, there are numerous examples lying before us which we may notice on another occasion. At present we shall devote a few remarks to Mr. Bell's performance, which constitutes an instance of the third kind.

The author informs us, in his advertisement, that the present Treatise was arranged for competition for the prize which his most merciful Majesty the Emperor of Russia *promised* to the successful solver of the curious enigmas which are still involved in the etiology, pathology, and mode of propagation, of this disease. Mr. Bell has, however, been induced to make it public rather prematurely, by the forced marches which the cholera has made to the Baltic, and the increased alarm which has consequently been occasioned in this country.

In his arrangement the author follows the categorical order propounded by the Russian government, and his work therefore is composed of six chapters. The first of these purports to give a detailed account of the nature of the disease; the second, a statement of the causes which give rise to it; the third treats of its mode of propagation; the fourth relates to the very simple problem of "A demonstration by means of exact and faithful experiments of its being communicable from one individual to another, if such be the fact." The fifth inquires into the measures to be adopted for self-preservation against contagion, should the disease prove contagious; and the sixth, regards the means best calculated to ensure recovery.

In his introductory observations, the author informs us of the peculiar facilities which he enjoyed in the study of this disease, having held a post in the General Hospital of Madras, under Surgeon Annesley, and having subsequently witnessed the ravages of the cholera in various districts of the Indian Peninsula.

On these several topics the author has produced a treatise which contains some valuable matter, mixed up with much that appears to us to be of a very questionable kind. As we shall give rather an extended analysis of the work, we need not here state our reasons for this opinion. We would, however, premise, that whatever may have been the author's experience in the disease, or how long soever his speculations regarding it may have been formed, the work itself bears positive testimony of having been hastily committed to the press, a circumstance always inimical to the value of any publication, as a standard repository of opinions. The proof of this fact is contained in the author's reference to, and quotations from, a masterly review on the subject, published in the *Edinburgh Medical and Surgical Journal* for the present month.

In the first chapter the author sets out by objecting to the names of *cholera morbus*, *spasmodic Indian*, or *epidemic cholera*, and he adopts, by preference, the appellation of *cholera asphyxia* proposed by Mr. Scott. His motives for this preference may be gleaned from the following extract:—

"Of all these appellations, that of cholera morbus is the most unfortunate, though perhaps more likely to mislead the student than the practitioner. To the latter, the first case of the disease points out the inapplicability of the name; whereas the student can never get rid of the idea, that he is studying a disease which is seated in the abdominal viscera, and he endeavours to bring every symptom to bear on the disease which has taught him the meaning of 'cholera morbus.' It will be seen in the sequel, that it is of the utmost consequence to forget that the Indian disease has ever received a name so likely to interfere with our attaining a correct acquaintance with its nature. Cholera spasmodica is not much more distinctive, as spasms not only occur in the common cholera morbus, but are far from being invariably an accompaniment of the Indian epidemic; indeed it often happens, that in the most unmanageable cases there are no spasms. Mr. Scott, in the Madras Report on Cholera, has proposed the term cholera asphyxia. And though it would be an advantage to get rid of the word cholera altogether, still it has become too commonly received a name for this disease to admit of our disusing it. Asphyxia, in its original signification, is particularly appropriate and distinctive; the disease never continuing for any length of time without producing a suspension of the pulse. In this treatise, therefore, the name which Mr. Scott has proposed for the disease shall be used."

With the propriety of this nomenclature we are by no means disposed to coincide. Some forms of apoplexy, asthma, diseases of the heart, spasm of the glottis, &c., might receive the same denomination with nearly equal correctness, and so might suffocation by any of the irrespirable or narcotic gases. It is both unphilosophical and dangerous to name a disease from its effects, for these, though apparently similar, may spring from a multitude of opposite causes, the nature of which will materially modify the treatment of the affection induced.

Mr. Bell next proceeds to describe the symptoms of the disease, and this division of his memoir, we are bound to say, he has ably executed, presenting us, on the whole, with as spirited a portrait of this awful disease we remember to have examined. He reckons four stages in its progress. The first, or the invasion period, is so insidious, that the individual attacked may be quite unconscious of its presence, and it is only evident to those well acquainted with the malady. The most prominent of the symptoms appear to be, the anxious and unnaturally earthy state of the countenance, the eyes being seemingly sunk in the head. The patient not unfrequently says he is a little deaf, and one or more unnatural alvine evacuations have occurred; "the first of these is generally characteristic. There is a sudden call, and the whole intestines seem to be at once emptied."

In the second stage the pathognomonic appearance of the countenance is still more decided, and great prostration of strength takes place: the colour and consistence of the evacuations assume a peculiar aspect, usually like water in which grain has been boiled, with pieces of opaque, white, or yellowish coagulated matter floating in them. The third and fourth stages the author thus describes:—

"3. In the third stage, the appearance of the countenance is still the most prominently characteristic symptom. The eyes, surrounded by a dark circle, are completely sunk in the sockets, the whole countenance is collapsed, the skin is livid, and the expression so altered, that the patient's most intimate friend can hardly recognise him. The surface is now generally covered with a cold sweat, the nails are blue, and the skin of the hands and feet is corrugated, as if they had been long steeped in water; the sensibility of the whole surface is deficient, but it is by no means uncommon for patients to complain of a burning heat in their *cold* skin. Vesicatories do not act; even boiling water does not raise a blister. The voice is hollow and unnatural. If the case be attended with spasms, the suffering of the patient is much aggravated, and is sometimes excruciating. The spasms commence in the hands and feet like cramp; they stretch up the limbs to the trunk, which, however, they do not always reach. In some cases again the muscles of the abdomen are principally affected, and they are drawn towards the spine during the whole course of the disease. These spasms may have commenced early in the disease, being on some occasions the very first symptom. The discharges from the stomach and bowels are at this stage very irregular; in some cases they are still very frequent, in others,

after one or two evacuations, they wholly cease. The pulse at the wrist, if it have not ceased, is scarcely perceptible, and the heart is beating feebly; and when the spasms are severe, they frequently, even though the pulse be still quite distinct, stop it during the paroxysm. The same effect is produced by excessive vomiting. The breathing is slow and often oppressed; this also sometimes occurs early in the disease; the exhaled breath is cold; and though the heat of the body is some degrees below the standard, the patient throws off the bedclothes, and beseeches the bystanders to allow him cool air and cold water. Hiccup is not an uncommon symptom.

"4. In the last stage the intestinal evacuations have most likely ceased; the eyes, completely sunk in their orbits, are glazed and flaccid, turned upwards, and half-covered with the eyelids; the spasms are now commonly at an end; the extremities, indeed the whole body, is that of a corpse, and the impression communicated by the skin has been well likened to that of "a damp hide;" every artery has ceased to pulsate, and the action of the heart, if perceptible, is a mere flutter; the whole body is bathed in a cold and clammy sweat: it is painful to witness the oppression of respiration and jactitation of the sufferer. The dying man can still be roused, but when undisturbed, he generally appears in a state approaching to stupor; and though often in a humour which might almost be termed sulky, is in most cases coherent to the last. These symptoms are the immediate forerunners of death."

Although the propriety or practical utility of the preceding subdivision of stages may be fairly questioned, the *ensemble* of the picture nevertheless is ably drawn, and deserves serious attention. Mr. Bell next mentions an extremely curious phenomenon often witnessed in this affection. After a patient has been to all appearance dead, and when the attendants are dressing the corpse, "spasmodic twitches have taken place in the limbs, having in some instances even extended to the muscles of the body, and general spasmodic contractions have supervened." He further states, that the analysis of the symptoms in extended numbers of cases, shows, that spasms (meaning thereby the outward and visible convulsion), vomiting, or repeated purging, are not essential to the disease, inasmuch as these symptoms are not only occasionally absent in individuals, but have been wanting in "local epidemic visitations." But, in all cases, there are the "collapsed countenance, blue lips and nails, shrunken fingers, the total failure of the usual secretions, deficient animal heat, suspension of the pulse, and remora in the venous circulation."

The author next presents us with a view of the post-mortem appearances usually noticed. Great venous congestion in the abdomen and venous system in general, is briefly the abstract of all his necroscopic inquiries. The author here makes a most unreasonable digression, and enters into the general question of bloodletting, which he labours to prove may remove prostration of strength, and on which we eventually find that he confides almost exclusively as a remedial agent.

Returning from this topic, he proceeds to inquire into the supposed proximate causes of the disease; he rejects inflammation, principally from the rapidity with which recovery proceeds in the successful cases; he also denies that it can be referred to any topical affection of the great sensorial, respiratory, or circulatory organs; neither does he agree with the opinion which ascribes it to deranged action of the mucous surfaces; and he also very candidly admits, that the venous congestion on which he lays so much emphasis in his treatment, can only be regarded as an effect, not a cause of the evil. Rejecting all these hypotheses as insufficient or erroneous, he propounds his own opinions in the subjoined terms:—

"When in the animal body we find a *circle* of actions performed, distant parts united in function, and the flow of fluids to particular organs determined, controlled, or suspended, as may be necessary for certain purposes; whatever may be our notions with regard to *contractility*, we must attribute such combined actions to the power of the nervous system. And whatever may be our opinions as to the nature of those processes from which the various secretions immediately result—whether we consider them chemical or mechanical, or ascribe them to an unknown vital principle—still the determination of the pabulum to the secreting surfaces must be attributed to a general, and not to a local agent. The nervous system stretches itself out to every point of the body, and we find it distributed most largely where we may expect the energy of such an agent to be most required; demonstrating, as it were, that those actions on which the performance of the various organic functions depend, are

traceable directly to this system. Hence we seem to be justified in concluding, that if we find, by disease or accident, that an entire class of the involuntary functions of the living body is at once suspended, such suspension must be ascribed to an injury to that portion of the nervous system by which these functions are carried on. In cholera, in the very outset of the disease, all secretions, properly so called, are found to have failed; the alimentary ejecta are not gastric juice, pancreatic fluid, bile, mucus, or excrementitious matter. The kidneys cease to secrete urine; saliva no longer flows into the mouth, nor are the eyes moistened with tears; carbonic acid gas is not thrown off in its usual quantities from the lungs, and animal heat is not evolved in the body. Here then is a disease which consists of a suspension of a great class of involuntary functions; and it appears to be a fair conclusion, that its immediate cause is to be sought for in the nervous system. At this stage of our inquiry the question occurs—How can a disease be considered a nervous failure, in which we find the sensorium, the respiratory, and the voluntary powers unaffected? The answer to this difficulty may be comprehended in the following propositions, which embody the conclusions on this subject at which the author has arrived:—1. The great ganglionic or sympathetic system of nerves is possessed of a power wholly unconnected with cerebral influence, which it may retain after the brain and spinal marrow are removed, and which may cease to exist while these retain the full exercise of their functions. 2. To this system belong the circulation and distribution of the blood; and it consequently has a most important share in regulating secretion, and in carrying on the involuntary functions. And, 3. To the suspension of this power of the system, is to be ascribed the disease which has obtained the name of cholera asphyxia."

To support these conclusions the author enters into an ingenious and lengthened physiological disquisition on the distribution and agencies of the sympathetic nerve, and he certainly points out, very convincingly, that this nerve is mainly interested in the onset of the disease. He then endeavours to account for the discharges which so frequently become a principal feature in cholera; and with this view he premises some observations on the general subject of secretion. He objects to the promiscuous use of the words secretion and exhalation, which, more in a chemical than a philological spirit, he denies to be synonymous terms. As our space is, however, restricted, and as the thread of our analysis will remain unbroken by the omission, we pass over his speculations on this head, retaining the applications he makes of them to the explanation of the cholera discharges:—

"The above observations on secretion generally, appeared necessary to render the following explanation of the cholera discharges intelligible:—The fluids evacuated by the stomach and bowels, during cholera asphyxia, are found to be portions of the component parts of the blood. In health we never see such fluids discharged from the abdominal viscera;—they are not gastric or duodenal juice,—they are not bile,—they are not excrementitious matter,—nor are they the mucous secretion of the canal. The cholera discharge consists of the serum and fibrin of the blood. But then evacuations go on, and the bowels are filled, after the heart has ceased to act, when the arteries are empty, and when the capillary vessels are no longer supplied with blood by the usual course. The great veins, however, the liver, and the right side of the heart, are gorged with blood; the abdominal veins having no valves, regurgitation takes place, the capillaries are filled by a retrograde course of the blood, and are thus enabled to discharge the more attenuated parts of it. And although I believe that in these circumstances there is a deficiency of the nervous energy necessary towards *secretion*, still, as the medullary nerves retain their functions, the action by which this fluid is excreted will retain the character of life, and will differ from the purely mechanical and chemical changes which take place after death."

The author next offers some remarks on the source of the copious cold perspirations with which the patients are deluged during the latter stages of the disease, and which he conceives to originate in effusion from the minute *veins*, in a high state of congestion. He denies that it is referable to increased *arterial* action, and in proof of this opinion, alludes to the great insensibility of the skin, to vesicatories, &c., and to the absence of pulsation in the greater arterial tubes.

We have thus presented a copious, and we trust faithful, analysis of the two first chapters in this treatise, and on the whole we conceive them creditable to the author's ingenuity and talents. We now, however, approach a more serious division of his work, namely, that in which the fourth and fifth Russian problems are treated of; and here we may premise that the author avows

himself an anti-contagionist in the fullest sense of the term. We shall presently see the nature of the evidence on which he grounds this opinion, and we shall also be enabled to appreciate the degree of candour which governs some of the conclusions he has drawn.

In the first place he sets out by giving a brief and very general historical sketch of the Indian disease, but to this we need not particularly allude, as Mr. Bell's statement concurs in its broad points with that of Keraudren's. Both agree in the regular progress of the malady from north to south, uninterrupted by winds, seasons, or climates, and both also show that occasionally it observed a strangely fitful and capricious progress, passing by a town, village, or hamlet, to which after a lapse of time it again retraced its steps; sometimes it selected the circumference of a circle, leaving the interior untouched; or it raged in one battalion of a corps, or one company of a regiment; and sometimes chose for its arena a particular line of tents out of a numerous encampment. In the conclusion of this section, Mr. Bell offers some plausible speculations on the probability of the *ultimate* cause of this disease being of a galvanic or electric character. On this discussion, however, he declines to enter at length; and with a philosophical spirit which we could wish him to have preserved in his further arguments, he confesses his ignorance of the remote cause, and passes on to the discussion of the contagious or non-contagious nature of the disease. One of his first observations here deserves particular attention:—

"My own opinion, not hastily adopted, is, that cholera has not, within the tropics, proved itself contagious or infectious; and I trust that in traversing Europe, as there is reason to dread it is now about to do, this pestilence will not be found so far to have changed its nature as to render our intertropical experience on this head useless."

Viewing the matter in a political point of consideration, as it regards the interests of great communities and nations, not of small bodies of men or private families, the author here expresses a wish, the frightful character of which we are sure he did not sufficiently weigh. The most awful solution of this fearful problem, and the most to be deprecated by the friend of mankind, would be the determining of the *non*-contagious doctrine. Over a contagious disease human means are or can be made efficient. Against an epidemic they are powerless and futile. Prove the disease to be contagious, and all insular countries provided with a vigilant and faithful marine may repose in nearly perfect security; while, on the other hand, to use the words of Joenichen, nothing short of "arresting the respiration of a nation," can impede the fury of an epidemic like the present.

Of Mr. Bell's notions and arguments on the question, we now proceed to give a sufficient abstract, reserving our comments until the reader is in fair possession of the entire.

His first argument is founded on the alleged dissimilarity between the mode of attack, cause, and termination of the cholera, and the same events in diseases of an admitted contagious character.

"We have seen that cholera assumes the character of a nervous failure, and that it attacks those predisposed to it, *immediately* on their coming within the influence of its remote cause; that its symptoms are like those produced by certain poisons; and that recovery from it is *as instantaneous* as the restoration of the sensorial powers after suspended animation. It has not, therefore, in its mode of attack, in its course, or in its termination, any of the characters of those diseases which experience enables us to call contagious."

He, in the second place, urges the regular progress of the disease over countries differing in climate and position. He admits that this circumstance would favour the contagion doctrine, "had cholera advanced more rapidly on great thoroughfares, or on the sea-coast, where unrestricted intercourse prevailed, than in the interior of the country, and where little or no communication existed." The history of the Indian epidemic shows, he contends, that such a difference in celerity did not exist.

Thirdly, he lays great weight on the eccentricity of course to which we have already alluded. His fourth class of arguments is nearly of the same description. Fifthly, he adduces the fact, that sporadic cases of cholera constantly occur in India without the spreading of the disease. Mark what follows—"It is well known *that insulated cases of cholera are of constant occurrence in India*,

and that it is not uncommon for several individuals to be simultaneously attacked in a particular quarter of a city or camp, without any spreading of the disease."

In the next place, he endeavours to reconcile the mortality among the attendants of the sick and the physicians with his anti-contagion opinions, on the grounds that the former were usually exposed to the *local* causes of the malady, while the latter, from fatigue of body and anxiety of mind, were peculiarly predisposed to its influence.

In the next place he endeavours to get rid of the assertion, that the disease has been known to accompany troops in marching into a district in which it had not previously prevailed. This statement, Mr. Bell says, is so much at variance with the ascertained habits of the disease, that it would require most minute evidence to entitle it to credit, and he prefers to assign the fact alluded to, to the concealed prevalence of cholera, and the apathy of the natives in the districts in which such occurrences are stated to have taken place.

Under the seventh head he adduces the acknowledged fact, that cholera patients were admitted into the hospitals without communicating the disease to the other inmates. Lastly, he dwells on the immunity enjoyed by many persons who fearlessly associated with the sick, and even used the bed-clothes of those who died. On the whole, he expresses his conclusions in the following terms :—

" Even supposing, therefore, that an attack of cholera asphyxia might, in some instances, be accounted for on the doctrine of contagion, there are so many other occasions in which it is evident that no such quality of the disease can have existed, that the theory of contagion is only to be supported by admitting controvertible facts, and at best rare and otherwise explicable exceptions, in opposition to the ordinary phenomena of the disease ; and also in opposition to the unanimous impression of those medical men in India who have been most familiar with the disease."

Now, though we will willingly admit the ingenuity with which the author has drawn up this array of reasoning upon the question, we cannot give him great credit for the candour with which he has investigated it in its general bearings. Of the arguments he adduces, while many are either altogether fallacious, or controvertible to a high degree, others are by no means so conclusive as he is inclined to consider them, even although they may not weigh for the opposite doctrines. It is certainly no proof of the non-contagious nature of the cholera, that it differs from other contagious diseases, even though the alleged difference is satisfactorily proved, for small-pox differs from the plague, the plague from contagious fever, and this again from many other equally contagious maladies. Again; we must altogether deny his assumption, that the *seizure of the disease is immediate on exposure to its exciting cause.* The dangerous bearing of this doctrine may not at once be seen through, and the insidious manner in which its author puts it forward, adds still more to the extent of the mischief it might occasion if allowed to escape unrefuted. We might content ourselves by saying, that of all the authors who have written deliberately on the subject, scarcely one but Mr. Bell dreams of denying the existence of a latent period. Of these we may particularise Lichenstedt, Joennichen, Kerandren, Moreau de Jonnes, and several others on either side of the controversy. But the simplest refutation of the assertion is to be found in the histories of the French frigates, on board which no cholera ever occurred till they anchored in the Manilla Roadstead, and in which, five, six, and seven days after their departure, when they were some hundred miles away from any local causes, cholera suddenly appeared, proving, as strongly as evidence can teach, the existence of a latent period. All Mr. Bell's arguments founded on its non-existence, are therefore futile, and we must now examine into the validity of the other statements he advances.

His second statement, that the disease travelled no more quickly on the sea-coast, or great thoroughfares, than over the continental territory of India, is met by the fact that in the Russian epidemic, if we are to credit the report of Dr. Walker and other authors, such a difference in celerity *did exist, especially along the great rivers and roads.* Moreover, that the disease should be diminished in celerity along the coast of any country might be reasonably expected, when we consider the more vigorous constitutions of those engaged in maritime pursuits.

The safety of admitting a patient labouring under cholera into hospitals may appear the strongest proof of Mr. Bell's opinions. We cannot, however, admit its entire conclusiveness, when we call to mind the numerous instances we have known of the admission of contagious diseases into hospitals in this country, without their spreading to the other occupants of the same ward. In fact, from the cleanliness and ventilation of well-regulated hospitals, these are in the least degree favourable to transmission of diseases. Moreover, it is highly probable that a patient labouring under an acute internal disease of any kind, *is not susceptible of the influence of cholera* at all—at least, every one who has witnessed an epidemic contagious fever, will admit that the hospitals were comparatively exempt from its visitation, and that the patient labouring under other diseases almost invariably escaped.

The occurrence of the disease in secluded districts is inconclusive of its non-contagious character for two reasons—1st, the absence of proof that no communication took place; and, 2ndly, the author's confession that sporadic cholera commonly prevails in India even in extensive districts.

The argument, however, most irreconcilable with the contagion doctrine, is the eccentricity of the course of the disease, to which we have already alluded. But, on the other hand, this does not prove the theory of terrestrial or atmospheric origin to which the author evidently leans, inasmuch as the same condition of air and soil existed in the immediate vicinity, the occupants of which, according to the author's statements, remained free from the affection.

The last point to which we shall allude, is the immunity which he states to have been enjoyed by the hospital attendants in some particular cases. Now, though we are quite willing to admit that this argument is of considerable importance, still the author should not lose sight of the qualifying fact, that hospital attendants enjoy great immunity in almost all contagious diseases. This was especially observed in the plagues of Alexandria and Grand Cairo during the war in Egypt, and is perhaps to be attributed to the security acquired in many cases by *a residence in an atmosphere of animal exhalations*. We may refer to our recent articles on the influence of animal decomposition on the public health, for some examples of this singular medium of protection.

Granting, however, for the moment, that Mr. Bell has made out a good and persuasive case, why has he not had the candour to cite the at least equally-convincing facts on the other side of the question? Why did he suppress the instances, numerous and incontrovertible, of the happy effects of seclusion and isolation in protecting whole colonies from the operation of the disease? Why did he not at least examine into the case of the French consul at Aleppo, which we quoted from M. Keraudren's memoir in a preceding number? We might, if our space permitted, multiply many questions of this sort, and notice many similar suppressions; we have done enough, however, to show that Mr. Bell gives us but an *ex-parte* statement of the evidence in the affair, and that he either knows not, or slurs over, the testimony inimical to his opinions.

For ourselves, in the conflicting statements laid before us, we can perceive facts so opposite, that they admit of no reconciliation, and we feel compelled to admit, that as far as the evidence goes, *those who argue exclusively either for or against contagion, are equally fallible.* The general testimony, in short, inclines us to believe that the disease is, at first, strictly epidemic,—that it is *then* incommunicable from man to man, but that in the sequel of its progress it assumes a highly contagious character. We also feel much disposed to believe that the cause of cholera may, like yeast or leaven, reproduce itself in the individual into whose frame it has once been introduced, and that one dose of the poison may thus eventually generate a quantity sufficient for the extinction of the human race.

We need not allude further to Mr. Bell's chapter on the treatment of the disease, than to say that he warmly advocates bleeding and calomel, and as warmly condemns the liberal administration of narcotic remedies. We may, however, revert to this subject on another occasion, meanwhile we would refer all those who desire minute statistical information and philosophic arguments on this disease, to the lengthened

review of the Russian official documents just published by our northern contemporary, in an article worthy of the most brilliant days of that publication.

HOOPING COUGH.

ON THE PATHOLOGY AND TREATMENT OF PERTUSSIS.

By W. R. WHATTON, *Esq., Surgeon, Manchester.*

I VENTURE, without apology, to forward the following observations on pertussis. The disease has visited us in Manchester and the surrounding neighbourhood, very severely, in the form of an epidemic, during the last three months, and the mortality has been correspondingly extensive. At such periods, when cases of any particular disease are frequent, valuable opportunities are afforded for its investigation, for the examination of remedies and their effects, and for necroscopic observations; and, as it behoves the practitioner to acquire his knowledge on any and every occasion, how and when he may, such opportunities ought not to be neglected.

An excellent paper on this subject, by Mr. Sandwith, of Bridlington, printed in the third number of the *North of England Medical and Surgical Journal*, has induced me to transmit these remarks, partly in corroboration of his judicious observations, and partly with the view of submitting my own opinions and experience to the test of examination.

By following the doctrines of Watt, and some other subsequent writers, who have lately, and so ably, inculcated the dependence of pertussis on bronchial inflammation, instead of classing it among nervous disorders, I am desirous of aiding in the endeavour to rout the abettors of the Cullenian opinions of its purely spasmodic nature, and of offering my feeble support to the new theory; convinced as I am, most forcibly, both of the excellence of its foundation, and of its consistence with every sound principle of physiological and pathological reasoning. The idea that "the proximate or immediate cause of pertussis seems to be a viscid matter, or phlegm, lodged upon the bronchia, trachea, and fauces, which sticks so close as to be expectorated with the greatest difficulty, and by its nature excites spasmodic coughing," ought long since to have been exploded and forgotten; and "the irritability of the stomach and mucous glands," so fondly advocated and acted upon by the spasmodic pathologists, will, I hope, be exchanged for the better notions of inflammation, irritation, and morbid secretion.

The writings of Dr. Watt, Mr. Alcock, Dr. Hastings, and others, demonstrate, incontestably, the highly-inflammatory appearances of the mucous membrane of the bronchial tubes, after death, in fatal cases of pertussis, and my own dissections have always tended to corroborate their remarks. The membrane of the glottis and larynx, and of the trachea and divarications of the bronchi, is generally found highly inflamed, exceedingly vascular, thickened, and of a dull-red colour; frequently coated with frothy puriform secretion, in such quantities as to impede entirely the passage of air, and occasionally studded with ulcerations.

I have observed, however, that the substance of the lungs has, in some instances, been more affected than the bronchial tubes themselves; and in one case particularly, along with a large abscess in the right lobe, there was an extensive collection of matter situated between the pleura costalis and the ribs on the left side. This child was of a delicate strumous habit, and had been much debilitated by long previous illness. It is clear, I think, that the delicate mucous membrane of the glottis and cartilages of the larynx is, in the first instance, affected by the inflammation, and that it becomes afterwards the fixed seat of the disease. We may easily conceive that these parts would be quickly thrown into spasmodic action, and the membrane being highly vascular, in a short time the mucous fluid, which it separates from the blood for the purpose of moistening the air passages and organs of the voice, would be acted upon by the inflammation, and be so thickened and inspissated, as to become a frequent source of uneasiness and difficult expectoration to the patient.

The degree of febrile excitement is as yet moderate; the respiration is not much oppressed; the pulse, however, is quick, and we have torpid bowels and scanty and high-coloured urine, followed by hoarseness, cough, and redness of the eyes; and this may be considered, in general, the common order in which the symptoms announce themselves. As long as the disorder continues in the subacute stage, or, in other words, as long as the inflammation does not extend itself beyond the glottis and larynx, the case is favourable.

But the whole extent of the tracheal membrane is extremely liable to a continuation of the inflammation, which was at first seated in the glottis and larynx only; and in an exact ratio as it descends will be the violence of the spasm, the rapid succession of the strokes of the cough, the loudness and sharp tone of the hoop, and the difficulty and distress in recovering the inspiration

of air. There are also an accompanying dryness and stiffness of the membrane lining the fauces and larynx, which are productive of heat and continual thirst to the little patient, and which add greatly to the general amount of uneasiness. The pulse too is exceedingly quick, wiry, and hurried. During the actual existence of the fits, the functions of the lungs are entirely suspended, and consequently the arterialisation of the blood cannot proceed; great determination to the head takes place, and the countenance becomes livid and dark, the lips blue, and there is excessive agitation over the whole frame, until a sufficient quantity of air is recovered to relieve the asphyxia and to balance the circulation. By the time the fit is nearly over, a small quantity of tough, knotty mucus is brought up, sometimes streaked with blood, and this is usually lodged upon the surface and sides of the tongue, but, from the anxiety of the child to inspire, it is generally got out of the way by swallowing, and is seldom or very rarely thrown off. When this severe process is gone through, and the child is somewhat calm again, a free burst of perspiration usually shows itself over the forehead and lips, the infant recovers to a certain extent, and lies down till he is again disturbed by the approach of another attack. If the case has been very urgent, and the child has suffered severely during the fit from the exhaustion and fatigue, he lies quite passive and still, and will not allow any one to interfere with him, or even to speak, so great is his horror in anticipating the period of coughing, and so earnest his desire of delaying to the latest moment the return of the paroxysm. Should the disease be allowed to continue in this state without relief, the interval between the fits is gradually contracted, the difficulty of breathing is increased, the lividity of the countenance becomes permanent, and the child either dies from the consequences of the inflammation, from excessive exhaustion, or goes off suddenly in convulsions, from the undue pressure and effects of highly-carbonized blood on the brain.

The chief aim, in the treatment of the subacute, or milder cases, of pertussis seems to be to put the disease into a safe train, and to conduct it through its course by the exhibition of such remedies as are calculated to reduce the inflammation, and thereby to lessen the irritation, to promote an easy and free expectoration, and to keep the circulation upon the surface, but, above all, to prevent its assumption of the graver form. The bowels should be well and effectually opened with calomel and jalap powder, and leeches should be applied over the cartilages of the larynx, so as to remove the congestion, or to the back of the neck, or between the shoulders, if there be also much determination upwards. These may be repeated from time to time, until the breathing be effectually relieved. A mixture composed of four grains of tartrate of antimony dissolved in six ounces of water, and sweetened with some simple syrup, is what I usually employ, regulating the dose according to the age and strength of the child, and repeating it often enough to procure vomiting after the fits of coughing. Pediluvium, and a grain or two of James's powder, at bed-time. When the disease assumes the more acute form, energetic measures are demanded to subdue the inflammation. In some of these the pulse arrives at an almost countless celerity, the dyspnœa is continuous between the fits of coughing, and the child has every symptom of approaching suffocation. Unless prompt and decisive relief is given here, the case very soon gets beyond our reach, collapse follows, and the patient sinks.

From a child of four or five years of age, I have usually taken three or four ounces of blood from the arm, or jugular vein, from a free opening, with the happiest and most decided effects, and have occasionally found it requisite to repeat the bleeding in four or six hours, if the pulse rise to any-thing near its original fulness, and do not immediately become soft and compressible. Even under these circumstances, it is generally indispensable to have recourse to the application of leeches to the thyroid cartilage from time to time, and to exhibit freely the antimonial mixture. A small blister should also be applied over the chest.

The following case, occurring in one of my own children, will be sufficient, as an example of the treatment necessary for subduing this formidable disease in its more urgent form:—

A. B. W., a healthy boy, aged four years, of a sanguine temperament, was affected with pertussis about the middle of April. He was visited by a professional friend, and was treated with antimonials in the usual way, had leeches occasionally to the throat, and the bowels were regulated by proper aperient medicines. The case was mild, and rather favourable for the first six weeks, but became gradually more urgent, when he was removed into the country for the additional benefit of change of air. On the 6th of June, at one o'clock in the morning, he was suddenly seized with convulsive cough, excessive dyspnœa, and lividity of countenance; pulse 160, wiry, and hard, with that indescribable recoil which is so truly indicative of a high degree of inflammatory action. Being, fortunately, on the spot, I immediately drew blood from the arm until the pulse fell to 120, and was much softer, and the respiration had be-

come greatly relieved. The blood was highly cupped and buffed. In the space of four hours, however, the pulse had nearly reached its former height, and the dyspnœa had again become exceedingly urgent. Three ounces more blood were drawn from the opposite arm, with a correspondent beneficial effect; the pulse fell to 100, and again became soft, and comparative ease in the breathing followed immediately. An equable perspiration broke out over the whole surface, and the boy slept comfortably for two hours.

On the 7th two leeches were applied to the integuments over the larynx, and a powder, consisting of two grains of calomel and ten of powdered jalap, given; four loose motions were obtained from the medicine, and the child appeared in every respect improved, though pale and very feeble; pulse 100, soft, and free from recoil; cough much reduced.

8. Some lingering difficulty of breathing yet remaining, three leeches were again applied to the throat, and a powder given every four hours containing two grains of James's powder. Cough still less.

9. The aperient powder repeated, two leeches again applied to the larynx; breathing good, and the cough easy, and the intervals between the fits much lengthened.

10. Pulse 100; convalescent.

In a week the child was able to go out into the air, and has continued quite well ever since, perfectly free from cough, and his appetite excellent.

The only remarks I have to add to the foregoing observations are, that I am averse to the use of the warm-bath in urgent cases of pertussis in very young children. In no one instance has the immersion failed to induce great excitement, to accelerate the pulse, and to increase the uneasiness and difficulty of breathing. It is necessary, also, in ordering the application of leeches to the larynx, to have them fixed over the cartilages, and not on the soft parts on either side. I have in several cases experienced the greatest difficulty in arresting the flow of blood from the thyroid veins, after the use of leeches in these situations, where the cough has been violent; the nitrate of silver frequently fails, and one is obliged to sit by the patient, making pressure with the finger for several hours before the hæmorrhage will yield. I know instances where, from a very trifling neglect, the child has bled to death.

Portland Place, Manchester,
July 12, 1831.

DELIRIUM TREMENS.

To the Editor of THE LANCET.

SIR,—If the perusal of the following case of *delirium tremens* afford the readers of your valuable and increasingly interesting Journal as much satisfaction as its successful treatment did me, the time devoted to its narration will be considered as amply compensated by, Sir, yours, most obediently,

JOHN THOMAS.

Hackney, July 12, 1831.

CASE.

James Atchelor, aged about 42, a wine cooper, residing in North Street, Hackney Road, was seized, on the morning of the 27th of April, with violent tremor, accompanied with excessive mental agitation. This condition was ushered in by depression, and considerable functional derangement on the three previous days. He is a man whose physical deportment is good, being of an ordinary stature, well proportioned and muscular, and, under common circumstances, of a well-regulated habit of body; his appetite is natural, his digestion good, and his evacuations and secretions healthy and sufficient. But, from his unrestrained, free, and frequent access to the butts, his libations to Bacchus are copious and oft-repeated; his sacred revels he devoutly renews from day to day, and having no opinion of "holy water for lustration," he purges away the "contagious spots of human weakness" in potent draughts of ale and spirits. In consequence of these excesses, he has been twice attacked by delirium tremens, which may be termed bacchanalian inspiration. I attended him in both cases; the first was comparatively slight, but the last, to which I would now direct attention, exceedingly severe.

During the continuation of the disorder, apparitions of the most alarming character threatened him with direful calamities, the mere apprehension of which shook his reason from her seat. None could control him, or allay his fears, but "the doctor." He fled continually from room to room, from the house of one friend to another, and even from street to street, that he might escape the vengeance of his ghostly tormentors. He succeeded; every door should be closed and barred to prevent their admittance; they were, and, in capacious security, he proceeded with his coopering, using the chairs and tables as tubs, and the poker, tongs, and shovel, as tools, incessantly, during *five sleepless nights and four days.*

The chief object I had in view was to subdue the nervous excitement under which he fearfully laboured, by throwing him into

a profound sleep; this indication I proposed to fulfil by opium. I employed evacuants for the purpose of rendering the system more susceptible to the impression of the narcotics I intended to administer; with this view I operated briskly on his bowels, and in the afternoon of the 27th I gave him two grains of *pulvis opii* every two hours and a half.

28. Not the least effect; the excitement still continues; let two grains of opium be taken every three hours and a half.

29. No abatement of cerebral excitement, but, if any-thing, increased.

Venesectio ad ʒxvj. The blood rushed out impetuously in a full, round stream; not the least tendency to syncope; the pulse still continued in full force; the tremor equally urgent. As no impression appeared to be made, and as a sudden and fatal fainting was to be apprehended, not indeed so much from the absolute quantity of blood lost, as from a combination of circumstances, it was judged advisable to take no more.

℞ *Opii pulv.*, gr. vj;
Camphoræ, gr. viij. ft. pilulæ tres, quarum capiat æger j. quibusque quartis horis.

30. No alleviation of the urgency of the case. The blood was scarcely buffed, not at all cupped, and no unusual disproportion between the serum and crassamentum. *Pulv. opii*, gr. ij. statim. Two hours after there was no alteration.

℞ *Opii tincturæ*, ʒss;
Camph. solutionis, ʒvj. M. ft. mist. cujus capiatur pars quarta, ægro, 3tia quaque hora.

Two hours after taking the last dose the patient fell into a disturbed sleep, which lasted about seven hours. When he awoke I gave him another drachm of the tincture of opium, and desired he might have half a pint of porter, and a mutton-chop if he felt disposed to eat. He ate a small portion of the meat, but drank the porter with avidity. He again fell asleep. One day was blotted out from his remembrance. He awoke; the delirium was entirely gone, but his physical powers were completely prostrate. I ordered him, from time to time, brandy, wine, and food, *with limitations*, and I had the satisfaction of seeing him restored to his health and family within no very distant period.

"Brevis esse laboro
Obscurus fio."

In labouring to be short, I hope I have not become obscure.

USE OF THE NITRATE-OF-SILVER OINTMENT

IN CHRONIC CONJUNCTIVAL INFLAMMATION,

AND IN THE EARLY AND LATTER STAGES OF

GONORRHŒA.

By Hugh Neill, Esq., M.R.C.S.Ed.

It was in October 1827 that I first had an opportunity of seeing this ointment introduced to practice; I was then for some months a visitor at the Royal Westminster Ophthalmic Institution, and each day a number of cases were brought before my view, when its beneficial effects were so developed, that my attention was drawn towards it in the strongest manner.

The ointment, for the efficacy of which I shall vouch, is composed of ten grains of nitrate of silver, finely levigated, and a drachm of simple unguent, well mixed together. I started when I heard of its component parts, and saw Mr. Guthrie, the first who used it, fearlessly apply it between the lids, and rub it over the eye-ball. Still more astonished was I when, a few days after, the beneficial effects of its action upon the diseased surface were developed. From this time forward it was used in almost all cases of chronic conjunctival inflammation, with a success which I may call universal. It was used in many instances of the purulent ophthalmia of infants, and in each case in which I saw it applied, the best results followed.

Between the diseases of mucous membranes there is a close resemblance, and it was from seeing the case which I shall now mention that I was first struck with the propriety of adopting a treatment, which for nearly four years I have followed without the slightest cause for regret. A case presented itself in the institution, of conjunctival inflammation; the accustomed treatment afforded no relief, and the man had been for a considerable time under the medical officer's hands, when it was discovered that there was gonorrhœal discharge from the urethra. Mr. Guthrie recommended the introduction of a bougie armed for about an inch with the ointment. The result was favourable; the running in a few days was checked, and the disease of the conjunctiva then readily yielded to the treatment which it had before rejected.

In very many of our European climates I have had opportunities of trying the bougie thus armed, and I can decidedly pronounce, that in the primary stage of gonorrhœa, its introduction has, in the milder cases, in a few hours checked the complaint; in those

that were more acute, it has paved the way for a rapid cure.

In the north of Ireland, in 1829, a boy was brought to me who had a most hideous eversion of the upper and under lids of the right eye, caused by two fungous growths from diseased conjunctiva. I immediately used applications of solid nitrate of silver. These, with steaming over warm water, were followed up until the excrescences had been reduced from the size of large beans, to the level of the healthy surface of the lids. The ointment I then used for a short time, and a disease existent for more than a year, was expelled in seven weeks.

When up the Mediterranean in 1828, as surgeon of the steam ship *Duke of York* (now H.M.S. *Messanger*), our firemen were sadly annoyed by a sulphurous effluvia from coal procured at Savona in Italy, and their eyes assumed that bleared appearance which may be seen in almost every smoky Irish hut. Steaming over warm water, and one application of the ointment, always gave relief.

A man, a free liver, and formerly a prize-fighter, called upon me about ten weeks since; he had been for some years nearly blind. The shadow of light was all that was admitted, owing to a net-work of blood-vessels thrown across the front of the eyes, the meshes of which were so closely interwoven, that hardly a ray could gain admission to the retina. I tried the use of the ointment, and although most of the vessels of the sclerotical conjunctiva contracted and regained their natural appearance, yet the vessels of the conjunctiva of the cornea were nearly *in statu quo*. I scarified, but it was of no avail; I then removed a portion of their trunks with scissars, applying to the bleeding ends of the vessels the solid nitras argent. I now am applying the ointment; the cornea is rapidly regaining its transparency, and the patient has vision, which for nearly seven years was lost.

To speak again of gonorrhœa. I have had many cases of it up to twelve months' standing, and it is seldom that even at that late stage my friends have to ask for a third "poke" of the bougie. If the trial and its results should prove as beneficial in other hands as it has done in mine, I shall be glad, for this simplicity of treatment in the early and latter stages of gonorrhœa, will conduce much to the allevistion of a most teasing, and, to both patient and surgeon, tedious disease and irksome attendance.

Nelson Street, Liverpool,
July 6, 1831.

BOTANY AND PHYSIOLOGY, OR THEORY OF MEDICINE,

AS CONSTITUTING A PART OF MEDICAL EDUCATION.

By WILLIAM HOWISON, *M.D., Lecturer on Materia Medica and Botany.*

SINCE publishing my last remarks upon botany and physiology, or theory of medicine, as constituting a part of medical and surgical education, which appeared in the Numbers of THE LANCET for June 13th, 1829, and May, 1830, I feel happy to see that the Apothecaries' Company of London have done that justice to botany, to which its importance, as connected with materia medica, entitles it, and which has been so long called for, by giving it a place as a distinct course of lectures (unfettered by the word medical, and unconnected with materia medica) in the course of study laid down by them for their permission to practise. I am convinced that future experience will prove to them, that in doing so they have given satisfaction to the public, and to every liberal mind, and have thereby advanced the respectability of the medical profession throughout England, over which their jurisdiction extends.

Had they, in like manner, separated physiology from anatomy, and made a distinct course of it under its own name, or converted it into a course of theory of medicine, they would have rendered their course of study complete and perfect, and have satisfied the public. I hope in the next regulations which they send out they will be convinced of the propriety of doing so, and will put this suggestion in force accordingly. I would ask, Can justice be done by the teacher to physiology, when conjoined in the same course of lectures with anatomy, and delivered at the same hour? Or, with equal propriety, I may reverse the question: Can anatomy be properly taught, when conjoined with physiology under similar circumstances? Any individual versed in the teaching of these branches of medical education, would, without hesitation, answer, No. It is the subdivision of labour which produces perfection. Anatomy alone is a subject of such importance, that it requires more than the time allotted to it in medical regulations to do it justice; and when physiology is conjoined with it, it operates to the imperfection or destruction of both. In point of fact, physiology itself would require the whole period of time for its consideration which is allotted to the two. Among the errors which have been committed in the course of study laid down for

the education of our Edinburgh surgeons and apothecaries, they have kept clear of this.

Physiology ought, undoubtedly, to have been made a distinct course of lectures also; and in place of legislating (as the Royal College of Surgeons of London and the Apothecaries' Company have done), that the student should attend two courses of anatomy, physiology, and anatomical demonstrations, they ought certainly to have said, that he should attend one distinct course of anatomy (or what would be more proper, two), and one distinct course of physiology, or, what would be preferable, of theory of medicine. That the Royal College of Surgeons of London, in their last regulations, should, in the present unfavourable state of medical education, have combined botany with materia medica, in a three months' course of lectures, and physiology with anatomy, in the same space of time, and still persist in doing so, in defiance of common prudence, is what sensible men must be astonished at. Would not the two learned and respectable bodies now alluded to, do well to study the beautiful and perfect regulations of the universities (even of the London University), or the correct education of the Army Medical board, which now includes six months, or two courses of botany, and a distinct six months' course of theory of medicine? The errors into which they have fallen, can only have been accidental, and will be corrected.

Why do the Navy Medical Board still refuse to give botany its due, by excluding it from their course of study, in every other respect so complete and satisfactory, when the service they supply with medical officers, from the liberal policy of our enlightened government, of late years, in promoting voyages of discovery, furnishes such an extensive and useful field for its cultivation and improvement? Does the medical officer attached to that Board (as the phrenologist might feel inclined to say) not possess the organ of appreciating the value of botany? Or is he inimical to its advancement? Or has it escaped his notice? Or have no later regulations than those of February 1826 as yet come out, allowing of the important addition of a course of botany being made to them? Is it not surprising that the Navy Medical Board should insist upon eighteen months' attendance upon surgical lectures, and omit botany altogether? I omitted to mention, that in Edinburgh, Glasgow, &c., in their medical and surgical regulations, they do not admit of physiology, as taught by the teacher of anatomy, in combination with anatomy, but presume that he confines himself to his own department alone.

Why are the genuine or original regulations of the various London medical boards, the Royal College of Surgeons, the Apothecaries' Company, the Army and Navy Medical Boards, the East India Company Service medical regulations, &c., procured with such difficulty, or so little known in Edinburgh (or in Scotland), one of the first medical schools in the world, distributing innumerable pupils over the surface of the globe? We are almost entirely indebted for our knowledge of these, to the copies of them which appear in the pages of the LANCET and other journals. Can no plan be fallen upon for diffusing the originals more generally? Would it not be well to forward them to the various universities and Colleges of Surgeons, to be hung up in the lecture rooms of the professors and individual teachers; as also in the public hospitals and dispensaries, for the information of the pupils, their teachers, and the more advanced individuals of the medical profession; as also for the benefit of many persons unconnected w h the profession, interested in the future education and advancement of their children? Whilst writing this paragraph, I sent to the shop of Messrs. Stewart and M'Lachlan, booksellers in front of the University, for the regulations of the Apothecaries' Company of London, where I was told they would be forwarded by Mr. Watson, their secretary, eight months ago, whilst in London; but I received for answer, that they had never as yet arrived.

It may be asked, Why is botany not included in the regulations of the Edinburgh College of Surgeons and Apothecaries, of late so much agitated and altered? Such an improvement has been repeatedly suggested and brought before their consideration, but as yet without success. I leave the answer of this question to what one of their number facetiously calls their influential members. By the addition of mathematics and mechanical philosophy (classes not medical), they have already made their course of education too expensive for the pockets of Scottish students.

As, ere these remarks, I have repeatedly recommended the substituting a course of theory of medicine for that of physiology in the London courses of lectures, it may be necessary for the information of those who do not know the nature of this course (and who no doubt will be surprised when informed that such a course of lectures, although strictly enjoined to be attended for twelve months by every individual entering the naval service of Great Britain, and six months by every medical man entering the army, is not in existence in London, or, so far as I know, in England), that I should mention the particulars of it as taught at Edinburgh and elsewhere. Our

lectures on the theory of medicine are only delivered during the winter and spring months; they commence about the beginning of November, and terminate about the end of April, including nearly six months; they consist of four great divisions, 1st, History of medicine; 2dly, Physiology; 3rd, Pathology, and, 4thly, Therapeutics, including the usual subdivisions of each. Attendance upon such a course of lectures for a period of six months, has been from the earliest period included in the regulations of the Royal College of Surgeons of Edinburgh, Glasgow, &c., for their diploma for liberty to practise.

If any individual employed in the teaching of medicine, will think it worth his time or trouble to answer one or all of these queries, he will oblige their author, and benefit the medical profession. In publishing these remarks, I may be accused of presumption; of meddling with matters with which I have nothing to do; of interfering with individuals and their actions far superior to myself, of higher rank and longer standing in the medical profession. To this, I trust, I may be allowed to reply, that no individual respects more than I do, my seniors in the profession, or those who possess greater abilities or good fortune than myself. More than ten years spent in teaching of materia medica and theory of medicine in Edinburgh, one of the first medical schools in the world, however, entitle, and I may say compel, me, to make these observations for the benefit of the medical profession.

9, Nicolson Square, Edinburgh;
May (received in July), 1831.

Mr. Costello on Lithotrity.—At the annual public sitting of the Academy of Medicine, which has just taken place, "honourable mention" (according to academic phraseology) was accorded to the memoir of our countryman, Mr. Costello, on the comparative merits, difficulties, &c., of the lithontritic and section operations. Mr. Costello was the only foreigner who received this compliment.

Dr. Weatherill's case of Excision of the Cervix Uteri.—It is stated in a letter by Dr. C. F. Hildreth of Boston, in America, that the patient who was the subject of the above operation died ten months afterwards, under Dr. H.'s care, of the disease for which she was operated on, while he was physician to the Boston Infirmary. The body was not examined after death.

TRIAL
IN THE
COURT OF COMMON PLEAS.

COLLIER v. SIMPSON.

"It would be highly advantageous to the public, and likewise to the best part of the medical profession, if the elements of modern medicine were made a portion of the liberal education of every gentleman; for then medical men and medical measures would be under the wholesome control of public opinion, so that practitioners would be estimated by their merit, and some of our corporate institutions would undergo those salutary changes which are imperatively demanded by the increased intelligence of the age."—*Armstrong.*

To the Editor of The Lancet.

Sir,—I take the liberty of calling your attention, as an independent medical journalist, and, through your publication, the attention of the medical profession generally, to the evidence of the physicians subpœnaed by the plaintiff in the late trial of Collier *versus* Simpson, in the Court of Common Pleas.

In publishing this evidence, I disclaim all personal feeling, but think it highly important that it should be laid before the medical profession as illustrative of the necessity of medical reform. I would, therefore, only premise, that this was an action for slander brought by a physician who had received a license from the London College of Physicians about three weeks previous to the cause of action, against a member of the College of Surgeons and a general practitioner.

The plaintiff prescribed for a child seven years of age, who was supposed to be labouring under hydrocephalus, *a two-ounce mixture, composed of an ounce of the infusion of digitalis, and an ounce of the solution of corrosive sublimate; two teaspoonfuls to be given every three hours for the first three doses, and afterwards every four hours.* The defendant, who had previously been attending the child, on being shown the prescription by the parent after it had been continued two days, said, "This medicine is a rank poison, I would not give it to a child of mine." He was said by the parent, who is a poor ignorant woman, also to have called it "hog's vomit" (oxymuriate), or some such word: this was the slander for which the action was brought. On the plaintiff being told the defendant's observations, he immediately consulted with Sir Henry Halford, by whose advice the medicine was discontinued, and two teaspoonfuls of a mixture composed of ten drops of *laudanum* and an ounce of *aniseed water*, to be given every six hours, were substituted. To speak to the propriety of the

practice. Sir Henry Halford, President of the College of Physicians, Sir George Tuthill, and Drs. Merriman and Elliotson, *fellows* of the said College, were examined, and the following is the evidence which these gentlemen gave.

Sir Henry Halford said, it was his duty to examine candidates for a license. He examined Dr. Collier. Thought that hydrocephalus was one of the points upon which Dr. Collier was examined. Dr. Collier's duty in the present case was to get the water off the brain by absorption, and passed off by the kidneys. The prescription was very appropriate. Looking at the appearances on Tuesday, the second prescription was a proper one. Having regard to what he had heard, he thought the doses not excessive, but proper. Believed such quantities had been sanctioned. Dr. Merriman was a good authority; Sir Astley Cooper was a good authority.

Cross-examined. Had never seen the child. Suggested to Dr. Collier *that it might be proper to apply opium in small quantities* AFTER THE OTHER REMEDIES. Saw Dr. Collier late on the night of Tuesday or Wednesday. Had given a similar quantity of corrosive sublimate to a child seven years of age. Did not remember the name of any case. *One-third* was about the relative dose, between a child of that age and a grown-up person. *Never gave a grain and a half to an adult in the day.* Did not know that he had ever given three ounces of infusion of digitalis in a day to an adult. *Thought he had never given so much as an ounce of the infusion of digitalis in a day to a child of seven years.* Did not recollect a case, but had an impression on his mind that he must have given half a grain of the corrosive sublimate for two successive days. They were not common doses. Believed he had given them in combination; could not doubt it. The whole was *legitimate* practice. Could not tell whether it was a proper quantity of corrosive sublimate for infantile remittent fever. Could not tell whether an ounce of the infusion of digitalis was a proper quantity for infantile remittent fever. *Believed that water had been absorbed in hydrocephalus.* Admitted that he said to Mr. Lonsdale, defendant's attorney, that "IT WAS NOT TO BE ENDURED THAT ONE OF THE INFERIOR CLASS OF THE PROFESSION SHOULD FIND FAULT WITH THE PRESCRIPTION OF A MAN WHO HAD RECEIVED A LICENSE FROM THE COLLEGE." Did not say to Mr. Lonsdale that the prescription was proper, *mitigated* as the sublimate was by the digitalis. From the account given, there were symptoms of water on the brain, and the medicine was proper. Laudanum would be good in hydrocephalus, and save the wear and tear of the constitution.

Dr. Merriman. Saw no objection to the prescription. Should suppose that any prescription would be useless, but should not object to such a medicine. Thought it desirable to procure a flow of water from the mouth and kidneys. The prescription calculated to do so. *Had never given the two medicines in combination*, although he had separately. Had attended to hydrocephalus; was in court during part of the mother's evidence. Heard the state of the child from Mr. Dale; from that he thought it was a very proper medicine. Supposing the flow from the mouth to have occurred, the second prescription was a very proper one *to control the effect of the first.* Thought the treatment proper.

Cross-examined. Corrosive sublimate was a poison. Prescription was a strong remedy. Had not seen the child. Assumed that a considerable effusion had taken place from the symptoms. This assumption was founded on the mother's evidence. Had never given these two medicines in combination; it was much more common to give calomel. It was unfrequent to give the oxymuriate of mercury. Digitalis would make it more powerful as a diuretic. If he had ordered that prescription, should have thought it necessary to have seen the child next day. Good policy to do so. Prescribed for a great number of children he did not see. The effect of mercury on children was very slow. Unusual for salivation to occur in twenty-four hours, but it might happen. It was more common to begin with smaller doses, to ascertain how the constitution would bear it. It would have been courteous to consult the apothecary. Perhaps no gain to the child, for as he assumed this case to have been, it would not have been of use. If it were convenient for the gentleman attending, should have liked to have seen him. Thought it always proper to see the apothecary, but did not consider his hands tied.

Re-examined. Paralysis and convulsions are symptoms of hydrocephalus. The case would have required a strong dose, not an ordinary one. Could not say that any dose would have done good; in his judgment he very much doubted it. Did not think any dose would have removed the disease. Should have had reason to make the stronger impression. Would not give it in infantile remittent fever.

Sir George Tuthill. From the symptoms thought effusion had taken place. *Had never employed such a combination* as in the present case. Knew it was given as a diuretic. Would produce an effect on the kidneys. It appeared the child was in a dangerous state. A proper prescription if the effects were watched. Restoration of the arm would show it had acted beneficially.

The second prescription proper, as it *would check the salivation produced by the corrosive sublimate.*

Cross-examined. If not hydrocephalus, and if infantile remittent fever, would not prescribe such medicine. Proper if compression had taken place, which he assumed to have been the case. If given for two successive days, he thought it would not prove fatal. If the child of a scrofulous habit, it would have a different effect, and salivation would be more easily produced. Should not in that case expect it to be fatal if continued for two days. Would not employ it, but thought it would be safe for infantile remittent fever. It was very rare that salivation proved fatal. *Had not seen these medicines given in such quantities.* The effects of digitalis increased for a little time; sometimes hours after it had been left off. *Had not given to a child of seven years of age six grains of digitalis in twenty-six hours. Had not given half a grain of corrosive sublimate in twenty-six hours.* Paralysis is a strong circumstance to show compression.

Dr. Elliotson, *Fellow of the Royal College of Physicians, Physician to St. Thomas's Hospital, and Professor of Medicine at the London University.* Had had experience in hydrocephalus. Heard the mother's evidence. Paralysis frequently took place in the last stage of the disease. Insensibility also accompanied the last stage. Should not depend upon the term "teaspoonful" for such a medicine. *Had never given such doses to individuals of seven years of age.* Should wish to produce salivation and a flow of urine. These medicines were of a nature calculated to produce these effects. Would apportion the medicine to the state of the child. A strong medicine would have been necessary, but all would depend on what had been given before. If discharge of water was produced, so far it would have operated beneficially. After salivation and flow of water were produced, the second prescription might be necessary *to allay the effects of the mercury. Never gave the combination to children.* Has given it to adults. Never gave it in hydrocephalus. In combination they might be given with reference to their nature; but the *quantity was extreme.* Larger quantities were given in extreme cases than in others. Children sometimes required a larger proportion of quantity. Considered a case urgent where paralysis had taken place. Considered sublimate might have a more speedy effect in producing water. Did not know whether it was used in France. Did not know French practice.

Cross-examined. Had had much experience in hydrocephalus. *Never administered such a medicine; certainly not.* A strong dose might be necessary. Should have been very anxious in inquiring what had been done before. Should have been guided entirely by the medicine previously taken. Should begin with an ordinary dose, and increase it according to the effects produced. After such a prescription, should have seen the child twice in the day, or heard from some one on whom he could depend. If the tongue were swollen and the teeth denuded, the effects were stronger than desired. Should not think it careful watching not to see the patient for forty-eight hours. This medicine was likely to produce ulterior effects. Digitalis was a most unmanageable medicine; this was admitted throughout the profession; sometimes when the medicine appeared to be producing no effect, the patient suddenly died. Had strong fears about digitalis, it was a remedy he very much disliked. This was an extreme dose with those even who administered this medicine more freely than himself. The combination would not render either medicine less active. *A medical man might reasonably entertain doubts of the administration of such a prescription being fatal.* The sixteenth part of a grain, that is, a teaspoonful of the solution of corrosive sublimate three times in the day, was the largest quantity he had known given to a child of that age in twenty-four hours. The powder of digitalis was a more active form than the infusion. An ounce of the infusion contained about seven grains and a half of the powder. According to the directions he imagined the whole quantity would be taken in twenty-six hours.

Re-examined. Paralysis evinces a highly dangerous state. Ordinary doses would not be likely to do good.

The evidence of Sir Henry Halford requires but little comment. It speaks a language not to be mistaken by medical men. I merely ask Sir Henry Halford why, *immediately* my observations were made and told to him, he suggested the propriety of substituting small doses of laudanum instead of the corrosive sublimate and digitalis? Dr. Merriman answers—"It was proper to control the effects of the first." Sir George Tuthill answers—"It was proper, as it would check the salivation produced by the corrosive sublimate. Why, I ask, did Sir Henry Halford *immediately* order this proper prescription to be discontinued, and one to *check and control its effects to be substituted*? I know nothing of the nature of Sir Henry Halford's practice, but one of the physicians subpœnaed on the part of the plaintiff affirmed to me that he believed Sir Henry Halford to be the last man who would have ordered such a

medicine. Sir Henry Halford also believes that water has been absorbed in the brain. I will quote, by way of comment on this, from the review of Golis on Hydrocephalus in Johnson's journal. "It is almost needless to say, that in this and the succeeding stages (effusion and paralysis), *recovery is impossible*."

Dr. Merriman following in the same track, spoke of the propriety of the prescription, although he had never ventured to give the medicines in combination. Sir G. Tuthill had never given these medicines either separately or combined in such doses, but I suppose, thinking with Dr. Merriman, that the presiding genius of their College, like the king, could not err, they followed in his wake, and spoke to the propriety of a practice which, in a long course of experience, they had never ventured to adopt.

We next come to the evidence of Dr. Elliotson, and although this gentleman has given larger doses of many medicines than have ever been administered before, yet we find him giving his evidence in the scientific, cautious, and upright manner, which distinguishes a liberal and enlightened mind. He said the quantities of both medicines were extreme; that he had never given such medicines; that a medical man might reasonably entertain doubts of the administration of such a medicine proving fatal; that the sixteenth part of a grain of sublimate, three times in the day, was the largest quantity he had known given to a child of that age in twenty-four hours.

Drs. GRANVILLE, JAMES JOHNSON, COPLAND, and ANTHONY TODD THOMSON, were subpœnaed on the part of the defendant, but were not called.

So much for the medical evidence. Let the general practitioner judge of the liberal and unprejudiced spirit which dictated such language from the mouth of the supreme head of the profession, as that "it was not to be endured that one of the *inferior class* of the profession should find fault with the prescription of a man who had received the license of the College." I will ask the general practitioner of England, whether, in this age of improvement, we should bow to the authority of a college founded in the days of darkness and superstition,—whose superstructure has been supported by partial and interested men,—a college where the examination of candidates is conducted through the "mockery of a dead language,"—a college which distinguishes those that as being of a "superior order," who have graduated at Oxford or Cambridge, above those who have graduated at Edinburgh,—a college whose pharmacopœia is a disgrace to a learned and scientific nation,—a college which rejected Armstrong, one of the foremost in the ranks of the profession. Armstrong wielded his satire against that college to the last hour of his existence, and his repeated and impassioned language in speaking of it will not soon be forgotten. Reform is making rapid strides in our political, and must ere long be extended to our medical institutions; "for (to quote from Armstrong) the question is of such vital importance in all its bearings, that the time surely is at hand when a rigorous inquiry will be instituted into the present state of medical legislation, and when human health and human life will no longer be recklessly entrusted to collegiate formalities, but to an education strictly practical in all its material points." * * *

In conclusion, I trust I have not been unsuccessful in furnishing some evidence illustrative of the necessity of medical reform. To the general practitioners I would say, "We are an extensive and influential class, and in our ranks are men who, for medical talent, are second to none of the 'superior order.' Let us unite, and the great cause of medical reform must be effected. Those mouldering and antiquated corporations which are founded on narrow-minded principles and exclusive rights must crumble in the dust, and a new institution will arise, phœnix like, from their destruction, based on the broad principles of professional rights and public utility. Let us not (to use the language I held in this Journal in 1827) cling with superstitious reverence to the institutions of antiquity; they are little consonant with the progress of intellect; they very ill accord with the spirit of the times. If we look around and observe the intelligence that is abroad, we may be assured that the 'great tide is rolling on and gaining ground with every breaker.'"

I am, Sir, your obedient servant,
W. SIMPSON.

Hammersmith, July 14, 1831.

ROYAL JENNERIAN AND LONDON VACCINE INSTITUTIONS.

REPLY OF "MEDICUS" TO DR. EPPS.

To the Editor of THE LANCET.

SIR,—The principal object of my former communication was to point out a certain resolution of the Royal Jennerian and London Vaccine Institutions, whereby their sphere of utility has been narrowed so much, that, in the event of the National Vaccine Institution being removed, the country would be found unprepared, and unprovided, with the means of defence, in so far as it could look for assistance to the Royal Jennerian Institutions, and that a great mortality from small-pox would be an early consequence. To this Dr. Epps, in THE LANCET of July 9, has replied, denying the position; it may therefore be useful to place this matter in a more clear point of view.

We must make a broad distinction between the *capability* and the *willingness* of the Jennerian Institutions to furnish the necessary supply. That they are quite competent to afford the supply may be readily granted. The experience of former years of their existence nearly proves this, for the supply of vaccine ichor sent to all parts of England and of the world has been great beyond belief, and on the abolition of the National, their ability to afford this supply would be still further increased, in consequence of the increased number of patients in the neighbourhood of the metropolis whom they would be called on to vaccinate. Comparing the relative numbers vaccinated by these rival institutions last year, the increase might be in the proportion of 12,000 to nearly 4,000. Thus Dr. Epps's position, "that the National Vaccine Institution being removed the supply CAN be kept up by the Jennerian Institutions" is proved; indeed this was not attempted to be controverted by "Medicus."

The other point then for consideration is, whether these institutions are *willing* to afford this supply, or whether they can, in conformity with their resolutions, not only keep up the supply *at these institutions*, but also provide the country with the means of defence. I still contend that this could not be done.

On referring to the statements of numbers actually vaccinated by these institutions, it appears that last year 12,000 poor, in the immediate vicinity of the metropolis, were vaccinated by the National, and 4,075 by the Jennerian. The number of charges supplied by the Jennerian to 9,504 applicants was 43,387; and if we may suppose that the foreign distribution by the National bore the same ratio to its metropolitan labours, we may conclude that the National supplied to 27,000 applicants about 92,000 charges.

Here then, in round numbers, are 130,000 charges to be supplied to 36,000 applicants. But the Jennerian Institutions have resolved that "in future no persons shall be supplied with matter, unless they be governors or subscribers, or bear letters from governors or subscribers." How then are these 130,000 charges to be supplied to 36,000 applicants, or to so many of them as are not subscribers, unless it be expected that all these 36,000 applicants shall forthwith become subscribers; or, unless they prove themselves *unable to subscribe* and ask in *formâ pauperis?* It is clear that the country would be found unprovided, in so far as it could look for assistance to the Jennerian Institutions.

On the breaking out of a variolous epidemic, the better classes (those who remunerate medical men for their trouble in vaccination) are, generally speaking, found protected. They have taken care to submit their children to vaccination within the first months of their life. It is not so with the poorer class—those to whom vaccination must be offered gratuitously. Among this class there still remain very strong prejudices—so strong that many of them will not submit their children to vaccination in proper time to protect them; it is only on the appearance of a dangerous epidemic in their neighbourhood that their fears compel them to submit; then indeed they are panic struck, and flock for protection in such numbers that the practitioner in the country cannot afford it to all on the instant, and many lives are thus sacrificed. It is chiefly on this latter occasion that the medical man requires the assistance of some institution where there is always an abundant supply. The services of the medical men on such occasions appear to me more valuable to the cause of vaccination than the mere pecuniary aid of governors; and I do not clearly perceive in what sense medical men can be justly said to receive all the benefit. It would be well for the cause of vaccination and of humanity, that these institutions should go hand-in-hand with their directors and assistants.

Dr. Epps, in his reply, professes to obviate my objection to this obnoxious resolution, in the first place, by showing the grounds on which the governors passed it. The principal ground alleged is, that medical men use the matter procured from these institutions sometimes in vaccinating private patients as well as gratuitous ones (from the former they derive pecuniary emolument, and the latter they make a stepping-stone for professional advancement) and that they are well paid by so doing, and

therefore the governors have thought it foolish to afford a supply from institutions supported by the public. With as much show of reason might they object to receive the valuable services of their director in gratuitous vaccination at the institutions, because he too may, perchance, derive pecuniary emolument, and make his appointment a stepping-stone to professional advancement. Sensible, however, of the failure of this plea of justification, and aware that it will not, by the public, be considered a good reason for limiting their sphere of usefulness, these institutions, though anxious to assist in diffusing the blessings of vaccination to the utmost extent, cannot do so without at the same time affording some slight facilities to the medical men who voluntarily enlist themselves in the same good cause. The Doctor seems to allow the injurious tendency of the resolution, for he, in the second place, apologises for it, by attempting to show that its injurious operation will not be for any lengthened time. The only proof offered of this is, that since the publication of the resolution, many medical men have become subscribers. But this proof is not satisfactory, unless the Doctor is prepared to say that the number of subscribers added is equivalent to the number of applicants excluded. This fact may, however, help us to the proof, if proof be wanted, that in proportion to their means, medical practitioners are at least equally ready, with other classes of society, to attend to the numerous charitable calls made upon them.

In conclusion; it is with much satisfaction I have just now observed an advertisement on the cover of THE LANCET of June 18, from the Hospital for Small-Pox and Vaccination, at Battle-bridge. The resolutions are in the proper spirit of such institutions. In the desire to extend the usefulness of the establishment, I would refer your readers to the whole advertisement. I will, by way of contrast, extract part of the resolutions.—"Medical practitioners, and others, may be supplied with vaccine lymph between glasses. Persons desiring a supply may attend at the hospital and witness the selection. Practitioners in the country supplied with lymph by return of post, on addressing a letter to the resident surgeon, post-paid."

I will not again trespass on your valuable pages respecting this matter; it is now sufficiently before the public, and I trust good will result from the exposure. I am indebted to you for your indulgence.

MEDICUS.

June 11, 1831.

To the Editor of THE LANCET.

SIR,—I should like to ask Dr. Epps what can be the pretence for taking twelve shillings from the gentlemen who apply for the diplomas of the Royal Jennerian and London Vaccine Institutions, if they are not to be supplied with matter gratis. When I paid that fee to Mr. Johnstone, I was told by him that I could at all times have matter gratis, by sending to him for it; and surely Dr. Epps will not now say that I paid it merely for a diploma, the cost of which, to these institutions, I perhaps estimate too highly at sixpence?

I am, Sir, your obliged servant,

AN APPOINTED INOCULATOR.

July 13th, 1831.

To the Editor of THE LANCET.

SIR,—As a well-wisher of the Vaccine Societies, I have perused with regret some discussions in THE LANCET, provoked by the determination of the committee to place under certain restrictions the supply of vaccine virus.

The chief object in establishing these Societies was for the express and avowed purpose of exterminating the small-pox by supplying practitioners throughout the empire, *free of expense*, with this antidote to variolous infection and devastation, to facilitate and promote vaccine inoculation.

Discontinue these advantages, and the objects of these Societies are at an end; there will then remain no inducement for public support; the mere object of gratuitous inoculation is a trifling consideration; a business which can be conducted at all the medical institutions in the country.

Should these resolutions of the committee be persisted in, the institutions in question will sooner or later fall into decay,—an event which I hope never to witness. I am, Sir, your most obedient, humble servant,

ONE OF THE ORIGINAL PROMOTERS OF BOTH SOCIETIES.

London, July 14, 1831.

STOMACH PUMPS.

To the Editor of THE LANCET.

SIR,—As the letter of Mr. Weiss which appeared in THE LANCET of June 25, directly alludes to me, though not by name, I beg permission to trespass a moment on your time. It was to avoid the complaints against the hitherto complicated stomach-pumps and enema syringes that I attempted to construct one perfectly simple in its operation. Such I considered the one which you did me the honour to notice, the merit of priority of invention in which belongs I find to Dr.

Fox. For selling this instrument Mr. Weiss's lawyer sent me a letter stating that it was an infringement on his patent. I have since made one which I think is equally simple, and which on examination Mr. Weiss will find does not in the slightest degree encroach upon his patent. My right to vend this latter instrument I intend strenuously to defend. I am, Sir, your most obedient servant,

SAMUEL GRAY.

Princes Street, Leicester Square,

ABUSE OF THE OFFICE OF PARISH DOCTOR.

PARISH OF ST. LUKE, CHELSEA.

To the Editor of THE LANCET.

SIR,—If professional men were to come forward as *Veritas* has done (see Vol. xvii. p. 645 of THE LANCET), and state their grievances publicly in the pages of your Journal, gentlemen in office would stand corrected, if not from a sense of justice, from some feeling of shame, or perhaps from a *retiring modesty*, which shuns the honour of emblazonment to the public eye in the enlightened pages of your hebdomadal. *Veritas* says, "that these parish doctors, instead of aiding the poor, the impotent, and the helpless, direct their principal exertions to assist the families of divines, overseers, and others, who have influence in the parish, who, to their disgrace, receive such attendance gratuitously, and thus, invariably, is the said doctor enabled to secure his election. The duties of parish surgeons, and the medical men of dispensaries, should be devoted to the relief of the poor and *no others*; and those who divert such institutions from the purposes for which they were originally intended, are *heinous offenders*, and merit the marked contempt and reprobation of all benevolent and good men."

That this system is carried on to an almost incredible extent, I have no doubt, and *Veritas* would be doing a public service, in following up his admirable letter, by pointing out these heinous offenders to the contempt of all good men, and to the reprobation of every one who has honesty enough to spurn a favour offered him at the expense of any individual. For, at whose expense are these families, of overseers, and members of committee, attended? Principally at that of the parish. Many tradesmen will present him annually with the several articles in which they deal, but the parish pays. The regular medical attendant is cheated, and the poor are robbed of the time and attendance of the parish surgeon, who is paid exclusively for their benefit. Can any man perform the herculean task of *fully* inquiring into the cases of, and giving *efficient* attendance to, between three and four thousand paupers annually, besides traversing daily the innumerable streets, courts, and alleys, of an enormous and widely-extended parish containing 32,000 inhabitants, and attend in the parish, and out of it, to private patients? If the parish surgeon be not sufficiently remunerated, pay him more liberally, and do not allow the poor to be robbed of an efficient attendance, and the parish disgraced by allowing him to attend their officers to make up for parochial parsimony.

In the parish of Chelsea, about eight years since, the old occupants of place gave way to the self-styled "guardians" who, among other alterations, undertook the task of upsetting the system of attending the poor, and appointing what they were pleased to call a parish surgeon. Dr. A. Todd Thomson at the head of this body, in proposing the alteration, libelled the profession, when he said "that no medical man could attend two classes of patients, the rich and the poor; one class would be neglected, and that, he need not add, would be the poor." To remedy this evil, he proposed to elect a gentleman who should undertake no other business than that of attending paupers, and one of the first by-laws made by the guardians was, an undertaking drawn up for the parish surgeon to sign, declaring that he would not undertake any other business than that of attending the poor. To prove how essential the guardians then thought the signing of the document, Dr. Thomson was requested to send to the assembled candidates the by-laws relating to the office they solicited; he reported that all the candidates, excepting two, were willing to accept of the situation under the conditions proposed in these laws; on this ground alone, the two candidates were considered ineligible, and the Committee proceeded to elect a surgeon from the other candidates, and Mr. Gaskell was appointed. It is no excuse now to say, that the gentleman at whose instigation the alteration was made (Dr. A. Todd Thomson) was the first to engage this gentleman in private practice. Dr. Thomson most likely had an eye to the useful purpose to which he could turn the parish doctor, and soon after his introduction to the parish, he most shamefully (after perusing the clause himself, prohibiting him from attending any other than paupers) employed the parish attendant, to take charge of his own private practice during the time he was graduating at Edinburgh! After this dereliction of duty on the part of Dr. Thomson as one of the princi-

pal "guardians" of the parish, a tradesman, whose family is attended by the parish doctor, moved in the committee which governs the parish of St. Luke's, Chelsea, that the by-law requiring the parish surgeon not to engage in private practice be rescinded, and which, as a matter of course, followed.

The affair has thus gone on step by step, until Mr. Gaskell, instead of being called parish doctor, should receive the appellation of "cheap doctor to the parish officers of St. Luke's, Chelsea."

Mr. Gaskell has a regular income of 300*l.* per annum from the parish funds, an assistant and medicines provided from the same source, and was pledged *in honour not to practise privately*; but he does attend private practice, and in a way * * *. And here I stand on the same public grounds as *Veritas*. He attends many members of the "guardians" at an infinitely less rate of charge than any respectable man can do who lives by his profession; and this he is enabled to do from his receiving a regular settled income of 300*l.* per annum, a part of which is actually paid by those very medical gentlemen who are thus unworthily supplanted. I need hardly apprize you, that there are honourable exceptions to such conduct in many members of the parochial committee, but that the rule should apply generally, is disgraceful to those who are engaged in it. It is very easy for these gentlemen to cry him up as the great Apollo; that he is superior to all other medical men in the neighbourhood, while he himself thinks so highly of his own talents, that when requested by the committee to say whom he would wish, out of the twenty medical men in the parish, to be consulting physician and surgeon, as required by the by-laws, page 33, he replied that there was no medical man in Chelsea whose opinion he would think of taking, or words tantamount to that; and the committee-men, like himself, wishing, I suppose, to keep things snug between themselves, never appointed either a consulting-physician or surgeon, as they are positively directed to do by their own by-laws. If they do not intend to act up to these laws, why not pursue the convenient measure of rescinding them? We well know what evidence interested individuals will give. There was no lack of that on the trial of Mr. St. John Long.

But, Sir, I fear that I have greatly exceeded the usual limits of a correspondent. Perhaps I may have occasion to address you again, and if you think proper, I will hand you over a list of officials who rob the poor of the time and attendance of the parish surgeons, and by accepting favours at his hand, place themselves in a situation which renders them incapable of executing the power delegated to them by the parish, viz., that of being protectors of the poor, and impartial judges in the event of a complaint being made against the parish surgeon by individuals in humble life.

I remain, Sir, your obedient servant,

AMATOR JUSTITIÆ.

THE LANCET.

London, Saturday, July 23, 1831.

OUR benevolent correspondent, the "companion of Mr. LAWRENCE's youthful days," is silent, and we are left to pursue our course unaided by the lights of additional information. The promised "inquiry" has, we presume, proved, as we predicted, more *instructive** than satisfactory, but our correspondent has shown no great love of justice in withholding from us the facts which it is to be supposed his investigations must have elicited. *Pro* or *con*, we ought in fairness to have been furnished with the results. But does our correspondent, or does any other reader of this Journal, really conceive that we are desirous of attacking Mr. LAWRENCE,—that it is a source of consolation to us to refer to his name, character, and reputation, in terms otherwise than laudatory,—that we can adopt a different mode of expression in relation to Mr. LAWRENCE, from the one we have hitherto pursued, without labouring under feelings of intense repugnance and pain? We are told that "one sinner that truly repenteth, createth more joy than ninety and nine just persons who need no repentance," and certain it is that with an honourable public more disgust is felt at apostacy from a good cause in one person of talent, than there is pleasure derived from the consistent perseverance of ninety and nine honest men. We say not that Mr. LAWRENCE is an apostate, but his conduct not only gives a colouring to the assumption, but it has produced a

* Misprinted "serviceable" in our last number.

general belief throughout the profession that he has disgracefully abandoned the cause which he once advocated with warmth, and apparent sincerity. The extracts already given from the speeches of this gentleman show the opinions which he at one time entertained, or appeared to entertain, respecting the character of the proceedings of the Council of the College, and of the CONSTITUTION of the College itself. He complained in bitter terms of the "abuses" which had originated in the "*irresponsibility*" of the Council, and protested with vehemence that there was no adequate remedy for such abuses, if the constitution underwent not such a change as would provide for the ELECTION of the Council *by the voice of the members at large*. The whole of the reasoning of Mr. LAWRENCE—all the illustrative facts adduced by him, went to establish the soundness of that position. The charter should be changed, said Mr. LAWRENCE, so as to give the members the power of electing the Council; and, further than that, if the franchise were under the control of the members, even then, although talent and integrity might be the ground of their choice, yet it would be highly improper, and might prove exceedingly prejudicial to the public, if the Council were to be elected to their offices for *life*. Let us then test Mr. LAWRENCE's sincerity, by contrasting his conduct in 1830 and 31, with his conduct and reasoning in 1825 and 26. It is not enough for Mr. LAWRENCE to protest that he was not a "*Reformer*"—it is not enough for him to aver that his opinions remain unchanged. In putting him upon his trial—in placing his case before the great jury of his professional brethren, public justice will require that *conduct*, and not *motive*, be the subject of investigation. A knowledge of a man's intentions can only be ascertained from his words or his acts. It is not fair to decide against an accused, merely upon the tenor of a loose expression, or to decry a man, and hold him up to universal reprehension and disgrace, from the doubtful character of a single isolated transaction. Individuals who come forward and struggle for the general good, should not be hastily condemned for any apparent change in their mode of warring against their enemies. The public can form but a very limited conception of the difficulties which are opposed to those individuals who contend against the base, unprincipled usurpers of power. The combatant, whilst he looks straight forward in principle, has often to pursue a circuitous course in his modes of attack; to assault his foes from an ambuscade. Such means often lead him on to success, and place him unexpectedly in the very heart of the enemy's camp. But, if he embrace the moment of triumph to smile upon his foes—to erect the olive branch of peace before them—to enter into a mean, an unprincipled alliance with them—to sit down with them at their unhallowed feasts, and partake of the seductive bowl when its contents are quaffed in toasting the perpetuity of their infamies and aggressions—then it is that he, who was apparently the honest warrior, and was esteemed as such, becomes instantly and justly denounced as a traitor of the blackest cast. His former friends and companions are for a moment astounded at the x nt of his turpitude; but indignation quickly succeeds astonishment, and henceforth he is marked as the deadliest foe of the cause which he had so basely deserted and so cowardly betrayed.

If at this moment the members of the medical profession regard Mr. LAWRENCE with looks of suspicion, or even with feelings of anger, with whom lies the blame? Why, with that gentleman himself—because he has appeared to them under *two* characters, which are in no respect reconcilable. In 1826, Mr. LAWRENCE was the denouncer of the Constitution and Council of the College.—In 1831, he is the friend and co-

adjutor of the Council, and has taken office, without the assistance of "the voice of the members," under that very constitution which he had so severely and justly condemned. Nor is this all. At the public meetings over which he presided, he promised to be ready, on all occasions, to assist the members in their endeavours to abrogate the charter, and obtain a new constitution; but since Mr. LAWRENCE's election into the council, he has declined to attend any public meeting of the reformers, and has not only altogether withdrawn himself from the cause which he had previously supported, but continues to sit, act, and associate, in friendly combination with those very men who are *prosecuting criminally* his former friends for endeavouring to obtain those rights for which he himself contended, in *words* at least, while he was a professed reformer in 1825-6. These are heavy accusations—at least, if they were directed against ourselves, *we* should feel them as such—and whatever excuses Mr. LAWRENCE may frame, whatever apologies he may offer, there are not to be found in the profession two individuals who will acquit him of the charges of tergiversation. For his conduct in 1830-1, as compared with that of 1826, is as different as light from darkness. In fact, so far as his character and reputation are concerned, he has committed an act of *suicide*, which leaves his name without respect, and his opinions without weight. In looking, therefore, to Mr. LAWRENCE's arguments against the College, we ought to attach no more importance to them than to his present official conduct in support of his friends and copartners in tyranny—the "IRRESPONSIBLE" COUNCIL, for opinion *merely*, without sincerity, is of no value, and insincerity once established by an incontrovertible series of facts, weight of character in that individual is for ever annihilated.

With what opposite, and even altered feelings, therefore, as regards *one* of them, do we regard the labours of the authors of the three pamphlets on Surgical Reform! Dr. ARMSTRONG lived and died a reformer. His hostility to the vile system expired but with his last breath. But the animal life of Mr. LAWRENCE has been destined to outlive his reputation as a reformer. Politically speaking—almost scientifically speaking—he is not less dead than the once-celebrated and consistent ARMSTRONG. The name of LAWRENCE has ceased to be influential in the circle where it was cited with such zeal and enthusiasm. But it will be asked—Can we be serious in asserting that Mr. LAWRENCE will be almost without influence in a *scientific* sense? To this we shall reply confidently in the affirmative,—so far at least as the department of practical surgery is concerned; for Mr. LAWRENCE deceives himself if he believes that he owes his extensive practice to the estimation in which his scientific attainments are held by his professional brethren. Mr. LAWRENCE undoubtedly has a capacious mind. When compared with the rest of the hospital surgeons, he is a man of learning, and of unquestionably extensive reading in the literature of his profession; but can it be disputed by any individual who has marked the turn and progress of professional sympathies and antipathies during the last seven years, that certain individuals who stood conspicuous for their honours in the foremost rank of surgery, have since receded and sunk into comparative obscurity, whilst others, who are not at all remarkable for their surgical skill, have been called forward to receive emoluments and honours at the hands of a zealous profession? There is now amongst us an *esprit du corps*, and the medical public for some time past have shown a strong determination to support, professionally, those hospital surgeons only who have supported *them* politically, and if, as we predict, the great bulk of medical practitioners were now to withdraw their support from Mr. LAWRENCE, that gentleman would lose

nine-tenths of the practice which originated and flourished under the fostering and cheering spirit created by party zeal. Examples of this kind are not wanting.

The splendid success of Mr. O'Connell in Ireland as a barrister, was founded upon that gentleman's labours as a parliamentary reformer. The present Lord Brougham had little or no practice as a barrister, until he burst upon the public as a defender of the rights of the people in his advocacy of the persecuted Queen Caroline. Scarlett, who is a man of acknowledged tact and skill in his profession, is now, comparatively speaking, little heard of in our courts of law, since his proclaimed apostacy. The people support only those whom they *like*; even in the ordinary business of life, they employ not tradesmen, or even mechanics, of whose general conduct they disapprove. A religious man attends not with pleasure the church of a fox-hunting or a political parson, whatever may be his pretensions as an orator. But let us go a step higher, where nearly all the influences combine, and throw their weight into the scale of authority. Contrast the immense political influence of Mr. Robert Peel, the consistent opponent of Catholic emancipation (we mean not, of course, that he was just in his opposition), with that of Sir Robert Peel, the political apostate. Contrast Peel, the home secretary under Lord Liverpool, with Peel, the home secretary under the Duke of Wellington—Peel, the unflinching intolerant, with Peel the supple vacillator. In one case ascending erect in the high road of integrity,—in the other yielding "at command" to the recognition of principles which he had ever before professed to hold in the utmost abhorrence. Behold, again, the fate of Lord Lyndhurst, who has many noble and redeeming qualities. As the Solicitor General, even as the Master of the Rolls, he was the great champion of "Church" and Toryism, and fought, tooth and nail, for the exclusion of the Catholics from political power; but no sooner was he seated upon the woolsack, no sooner did he become Chancellor, than at the word of command he turned "right-about-face," and employed all his energies in the advocacy of rights which he had previously persisted in withholding from thousands of his persecuted countrymen.

These are examples worthy of remembrance, and as Mr. Lawrence has turned right-about-face—as he is not the man *in* the College that he was *out* of the College—we will venture to predict, that as he has lost the confidence, politically, so will he lose the support, professionally, of the great body of English medical practitioners. But in reply to the charge of insincerity, it is possible that this gentleman may use the language of Burke, who protested that "in all he did—in his opposition to corruption, and his advocacy of abuse—he always *had* been *sincere*—in fighting for *himself!*" In the question of surgical reform, therefore, Mr. Lawrence ceases to be of more importance than his "speech"-pamphlet, which we shall henceforth place on the shelf, and merely preserve as a curiosity.

There will be found in the pages of this week's Lancet, an account of an interesting case of English Cholera, forwarded to us by Dr. G. Hamilton Roe, one of the physicians to the Westminster Hospital.

The communication having been received on Friday, after The Lancet of last week was printed, folded, and stitched, and agreeing, as we did, with Dr. Roe, that by giving publicity to the report, much of the alarm which pervades the public mind on the subject of cholera might be removed, we thought it advisable to insert the case immediately in the columns of The Ballot of Sunday last. Dr. Roe finding that such was our intention from an advertisement which had been inserted in the newspapers by the publisher, immediately addressed to

us a note expressing regret, and even annoyance, that the report should appear in the newspapers before it had been inserted in the pages of a medical Journal. Unfortunately this note was received on Saturday when it was too late to alter the arrrangements which had been made.

This explanation is due to Dr. Ros, who certainly did not commit the unprofessional act of forwarding a strictly professional report to the columns of a *non*-professional publication.

MODE OF PREPARING THE IODURET OF LEAD.

To the Editor of The Lancet.

Sir,—Having read in a late Number of The Lancet an account of the success obtained by M. Caventon in the treatment of scrofulous affections by the use of a preparation denominated the ioduret of lead, may I beg the favour of your inserting his method of obtaining the above salt as recorded by him in the *Lancette Française*. You will, perhaps, also mention the formula for its use in an ointment. I am, Sir, your most obedient servant,

A Subscriber.

Wakefield, Yorkshire, July, 1831.

*** Dissolve an ounce of the acetate of lead in eight ounces of water, and an ounce of hydriodate of potash in two ounces of water; mix the clear solutions, *filter*, and place a portion of the liquid which passes through, in two glasses. To one add hydriodate of potash, to the other acetate of lead; if a yellow precipitate occur in the former, more hydriodate should be added to the filtered fluid. If the addition of the acetate of lead cause a yellow precipitate, more acetate of lead should be added to the filtered fluid. In either case filtration is again to be performed. By this management exact decomposition is ensured.

If the ioduret of lead be required for an ointment, the precipitate on the filter should be used in the moist state without further preparation. As to the quantity to be mixed with the unctuous substance, our correspondent must learn *that* by clinical experience; we would suggest, however, the addition of one drachm of ioduret to one ounce of lard for the first trials.

If the ioduret be required for internal use, the precipitate should be dissolved in boiling water, and the solution allowed to cool, when the ioduret is again deposited in beautiful golden crystals. These should be allowed to subside, the supernatant liquid removed by a syphon, and the moist deposit thrown on a filter, and *allowed to become dry* in the open air.

Our correspondent may use this medicine fearlessly to the extent of two or three grains a day. It may be given in a pill made with crumb of bread, or any other suitable adjunct.

USE OF

HUMAN FAT

IN THE ARTS, ITS ECONOMICAL APPLICATION TO THE PURPOSES OF FUEL AND FOR FEEDING VARIEGATED LAMPS.

(*Extracted from the Annales d'Hygeine Publique, &c.*)

At this period, 1813, a circumstance occurred in Paris, which, by its singularity and the importance attached to it by the government, deserves to be recorded. The servants of one of the anatomical theatres having been informed against for trafficking in human fat, were watched for some days by the spies of the police, and were shortly detected in the fact. The affair appeared sufficiently serious to be laid before the minister of general police. In the report drawn up on the subject, it was viewed in a moral and medico-political light, and the principle was laid down, that this fat, proceeding from bodies deceased in the hospitals, might propagate diseases, and even compromise the lives of those who touched it. It was proved on the investigation of the affair, that there existed amongst the servants of the Faculty of Medicine, and of the private theatres, a kind of association for the purpose of trading in this material; that the fat not previously melted was used to grease the wheels of their waggons—that *several quacks purchased it as a remedy in painful diseases*; but it was especially consumed, and in enormous quantities, by the enamellers and false-gem makers, who bought it under the name of dogs or horse fat. Two thousand pounds weight were found in the dwelling of one of the servants of the School of Medicine, 20 lbs. with another, 400 kilogrammes with a third, and two

barrels full were seized with a fourth. A waggon drawn by two horses, and assisted by three porters, was required to draw this enormous quantity of fat to the Montfaucon sewer, into which it was projected.

In order that no public alarm should be created, or any popular commotion excited, the affair was tried with closed doors, and the culprits sent to the Bicetre for six months. In the different interrogations to which they were subjected, they confessed that they had repeatedly sold the fat at seventeen sous the pound, and that they found it a source of much emolument. It is, indeed, surprising that the government did not obtain earlier information on this matter, for the servants made no mystery about it, and they rendered the fat publicly in the anatomical theatres. On the marriage of Napoleon with Maria Louisa, we saw them prepare with this fat, solidified with some tallow, considerable quantities of flambeaux and lamps, which they sold to the neighbouring spice-men, and which were used for the illumination at the Faculty of Medicine and the Palace of the Luxembourgh.

OBJECTIONS TO THE IDENTITY OF THE

NERVOUS INFLUENCE AND THE GALVANIC FLUID.*

Since the appearance of Wilson Philip's work on the vital functions, it has been very fashionable to believe, that nervous influence is identical with the galvanic fluid, or that the relationship between the laws and properties of these two principles is so close, that the effects which they produce upon the animal frame are strikingly alike. Although there may be more than plausible appearances to countenance this theory, it appears to us very far from being so settled by demonstrative experiments, as to warrant the general adoption which it has received from the profession. Galvanic excitement is the strongest stimulant which can be applied to the muscular fibre; and after all other forms of stimuli have ceased to operate upon the dead body, an electric shock can still awaken its irritability, and stimulate the muscles into violent contortions. But if galvanic be the same with nervous influence, or even a tolerable substitute, why can we not preserve the irritability of muscle after it has been separated from its nerves, by means of this agent for an unlimited period? Why does the stomach digest food for a very short period only, after section of the eighth pair of nerves, although it be regularly supplied with galvanic influence; and why will muscular irritability ultimately cease, although it be unremittingly excited by electricity? As long as galvanism is applied, contractility and secretion should proceed if these functions depend upon the action of nerves, and if galvanic influence be the same with nervous energy; but in despite of this stimulus, they speedily cease, and not only cease, but, what is strikingly worthy of attention, cease more speedily in cases where this stimulus has been applied, than in those where no artificial efforts have been made to prevent its exhaustion. Although we are very far from believing in many of Dr. Calvert Holland's conclusions, in his Experimental Inquiry into the Laws of Organic and Animal Life, still the experiments which he has performed upon the par vagum, in our opinion wholly overturn the conclusions of Wilson Philip in favour of the identity of galvanic and nervous influence, which he has drawn from experiments upon the same nerve. It is now quite certain that the stomach can digest its contents after section of this nerve, or even excision of a part of it, if the trachea be previously divided, or—what we have found equally sufficient—if an aperture be made in the windpipe, large enough to contain a tube of the size of an ordinary female catheter. It would appear, therefore, that indigestion follows section of the eighth pair, without this precaution, principally, if not wholly, from the derangement which occurs in the pulmonary functions; and that galvanism, in restoring the digestive process, acts only as a local stimumulant, which may be entirely dispensed with, if the lungs be suffered to carry on their functions without impediment.

Again, if galvanism and nervous influence have any properties in common, how does it happen that the former can act upon muscular fibre through some nerves only, and not through all? From the experiments of Haller, Fontana, Bichat, and Mayo, it would appear that the heart and intestines are unaffected by irritating the nerves which immediately supply them; and Bell, Magendie, and Beclard, have shown that scarcely any muscular contractions can be excited by the posterior portions of the spinal nerves or the ganglionic department of the fifth nerve, although strong muscular action may in this way be elicited through the anterior spinal nerves, and through the third, fourth, sixth, eighth, ninth, and part of the fifth and seventh central nerves. Were galvanic fluid generated in the human body by the contact of nervous with muscular texture, it should be elicited from all nerves, if not equally yet in some degree; and could galvanic fluid supply the place of nervous energy, it should not happen that one class of nerves are obe-

* Extracted from Art. 7, Med. Chir. Rev., July, 1831.

dient to such stimulation, while another class, which are equally indispensable to muscular action, wholly refuse to convey to the textures they supply the galvanic stimulus. The following observations of Dr. Alison upon this subject * are characterised by prudent discrimination and dislike of theory.

"Although we gave reasons for thinking that secretion and nutrition are truly independent of nerves, yet several facts show, that physical impressions on, or injuries of, the nervous system, materially and variously *influence these functions*, as well as the circulation in the small vessels, which are their seat. This kind of influence of physical impressions on nervous matter, is also imperfectly understood, and not easily distinguished from the effects of mental acts; but it seems exemplified in the following instances:—

"1. The effect of section of the eighth nerve in the neck, in not merely suspending the secretion of gastric juice at the stomach (which is a somewhat ambiguous case), but also in exciting a degree of inflammatory action there; in preventing the usual effusion of mucus in the intestines, even when arsenic has been swallowed; and, on the other hand, in exciting inflammation, and increasing the mucous secretion, in the lungs and bronchiæ.

"2. The effects (viz. inflammation, ulceration, and sloughing) produced on the eye-ball, and in some instances on the membrane of the nose, and on the gums, as was first ascertained by Magendie, by section of the fifth nerve, which supplies these parts; and likewise, in a less degree, by section of the sympathetic nerve in the neck—effects which have also been seen, in some cases in the human body, from disease of the fifth nerve.

"3. The inflammatory condition, with increased and altered secretion of the mucous membrane of the bladder, in many cases of paraplegia, dependent on injury of the spinal chord.

"The diminished nutrition and diminished secretions (e. g. by the skin) often observed in a limb which has been for some time palsied by section of its nerve, or disease of the brain, may be thought to illustrate the same point; but these effects are perhaps sufficiently explained by the total inactivity of such a limb.

"It is to be observed that such effects as those now stated on secretion and nutrition have been observed only in certain parts of the body, and chiefly from injury of certain of the nerves supplying these. These are the sentient nerves of the parts in question; and the secretions which are changed, are generally such as are habitually excited by irritations producing sensation. It is still doubtful whether the whole of the effects of these injuries on secretion and nutrition may not be explained by these considerations.

"These statements of physical phenomena, however, illustrate the very peculiar powers, known only by their effects on other parts of the animal frame, which the nervous system in living animals possesses. Only one theory, in explanation of these powers, appears to deserve attention—viz. that which ascribes them to galvanism, evolved in the animal frame, especially by the contact of nervous with muscular substance. It is known that, by the contact of these substances, galvanic phenomena, in a slight degree, may be produced; and that galvanism, however evolved, is a powerful stimulant of muscular contraction, in an excessive degree, is a powerful sedative, and has also appeared frequently to influence the capillary circulation and secretions.

"It appeared also, in some experiments by Dr. Edwards, that when the nerve and muscle of a frog were laid on a good conductor of electricity, irritation of the nerve had much less effect in exciting the muscle, than when they were laid on a non-conductor, which he ascribed to the galvanism supposed to be excited in the nerve being carried off by the conductor of electricity in the former case, and therefore not affecting the muscle.

"But whatever be the true explanation of this fact, the following general objections may be stated to the galvanic theory of nervous actions, such as we have hitherto considered them.

"1. The causes which excite, in the highest degree of intensity, those changes in nerves by which muscles are excited (e. g. such causes as bruising with a probe, or pricking with a pin), seem quite inadequate to the production of a sudden and powerful galvanic influence.

"2. We have seen that these causes do not act on all nerves, and through them on all muscles which they supply, but only on the nerves of certain muscles, and only on certain of these nerves.

"3. We have seen that the power of exciting muscular contraction is so far from residing in nervous substance in general, that it resides on one surface of the spinal chord, and not on the other, nor in its centre; nay, it resides in one part of a nervous fibre, in the medulla oblongata, and not in another part of the same fibre, half an inch higher in the brain.

"4. While the changes in the nervous system, which excite muscles to contraction, take place only in certain parts of the nervous system, those which exalt or depress the

* Alison's Outlines of Physiology, 1831.

vital power of muscles, appear to take place especially in others, and therefore affect especially other muscles; and the same cause (e. g. a violent concussion) which produces one of these effects exclusively in one nerve, may produce the other in another nerve immediately adjoining it.

"These facts seem sufficient to show, that if it be galvanism which enables nerves to act on muscles in the living body, it is galvanism excited by means, and subjected to laws, very different from what we observe in examining the galvanic phenomena of dead matter. And this is equivalent to saying that nerves act on muscles in the living body, in virtue of certain *vital powers*."

DISTINCTIONS BETWEEN

CAPILLARY AND OTHER BLOOD-VESSELS.

The following outline of a paper "On the Anatomy and Physiology of the Minute and Capillary Vessels," by Dr. Marshall Hall, which was read a short time since at the Royal Society, contains some observations of considerable interest:—The author considers the minute blood-vessels as *arteries* or *veins*, as long as their subdivisions or junctions are attended with a change in their dimensions. When no such change occurs, he denominates them *capillaries*. With the aid of an achromatic microscope of Dolland, he endeavoured to ascertain what differences existed between the systemic and pulmonary circulations, as far as regards these vessels. Dr. Edwards had observed, that the batrachian reptiles are speedily killed by immersion in hot water; and Dr. Hall found, that although by plunging animals of that order into water at 120° of Fahrenheit they were speedily deprived of all power of sensation and of motion, yet that the action of the heart continued for a very long time, thus affording an opportunity of leisurely observing the phenomena of the circulation, without the infliction of pain, and without any disturbance from the struggles of the animal.

In the fins and tail of the stickleback, the number of the capillary vessels is small, and their distribution simple; the artery runs along the border of each ray till it reaches the extremity, when it is reflected, and becoming a vein, pursues a retrograde course by the side of the artery. This simplicity in the mode of its distribution corresponds with the simple nature of the function of the part, which is merely an instrument for swimming. In the web of the frog's foot, which is adapted to a greater variety of mechanical purposes, the system of blood-vessels is somewhat more complex; the capillaries are more abundant; the arteries, which are nearly equal in number to the veins, pursue a more direct course; and the veins are larger and more tortuous. No pulsatory movement can be perceived in the blood while moving in the capillaries or veins, as long as the circulation is unimpeded and in the natural state. The author was unable to detect any anastomoses between the minute arteries, although they are frequent among the veins, where they give rise to occasional oscillations in the currents of blood flowing through them: neither could he discover any instance, in the web of the frog, of the immediate termination of an artery in a vein. The velocity of the blood is retarded immediately in its passage from the arteries into the capillaries, because the united capacity of the branches is greater than that of the trunk which divides to form them. In the mesentery of the toad the distribution of the vessels is simple, like that of the fins and tail of a fish. But in the pulmonary organs, where the purpose to be answered is that of diffusing the blood over the greatest possible extent of surface, the arteries and the veins correspond to each other in all their ramifications, and their adjacent branches generally pursue courses parallel to each other. Their transition into capillaries is effected with fewer subdivisions than in the case of other arteries. No disposition exists among these arteries to form anastomoses with each other, or with the veins; but the intervening spaces are uniformly occupied by a close network of capillary vessels. The lung of the salamander is simply vesicular; that of the frog is cellular as well as vesicular, and consequently presents greater difficulty in following with the microscope the course of the vessels as they traverse membranes situated in different planes. In the lungs of the frog, the larger vessels pass chiefly on the external surface; but in the toad they follow the course of the internal margins of the vertical meshes. The author concludes from his observations, that the capillaries, properly so called, have no power to contribute to the motion of the blood, and that the capillary circulation depends altogether upon the action of the heart and arteries. In cases of impeded circulation, he observes, the pulsatory movement of the blood may be seen, not only in the arteries, but also in the capillary vessels, and even in the veins.

CONTENTS OF THE VENA PORTÆ.

A paper was lately read at the Royal Society, entitled "An Examination of the Blood found in the Vena Portæ; by Dr. James Thackeray." The author, in the course of an inquiry into the properties of

the blood, was led to notice some peculiarities in the contents of the vena portæ, and to investigate this subject more minutely. The results of the experiments which he made for this purpose are chiefly the following. The blood contained in the vena portæ is darker than that of the other veins, inclining more to a ruddy hue than to the Modena red. Being less homogeneous, it has the appearance of being less perfectly elaborated. Its specific gravity was found to be very variable, but it is in general less than ordinary venous blood. It congulates much more quickly, and contains a larger proportion of serum, but a much smaller proportion of albumen, than blood taken from other veins. The serum obtained from it is redder than common serum, in consequence of its retaining much of the colouring matter of the blood: it has also a greater specific gravity, and yields, on exsiccation, a greater weight of solid matter. On the application of heat it concretes more quickly, but much less completely, than blood from the jugular vein, which peculiarities are attributed by the author to the different state and imperfect formation of the albumen contained in it. The crassamentum of the blood from the vena portæ does not expel its serum so fully as blood from other vessels; but it remains a soft mass, unless artificial means be employed, and it yields a considerably smaller quantity of fibrin.

ARM PRESENTATIONS.—SPONTANEOUS EVOLUTION.

Two cases of arm presentation offered themselves in our dispensary practice last year. One woman was successfully delivered by turning, and by bringing away the child by the feet; the other, that most extraordinary occurrence happened, called "the spontaneous evolution of the child." It is so rare a circumstance in the practice of an individual accoucheur, that it is more than probable I shall never again witness this most interesting process, though engaged in very extensive obstetrical business. Burns says, at page 397 of his Principles of Midwifery, "In this city (Glasgow), which contains 150,000 inhabitants, I cannot learn, that more than one case of spontaneous evolution has taken place, though some women have either died undelivered, or have not been delivered until it was too late to save them." *My* observations on the above case, go to prove, that the infant is not expelled by a revolution on its own axis, as advanced by Dr. Denman, but rather by a doubling of the child's body on itself, as described by Drs. Douglas and Gooch. Mr. Barlow states, that this process is most likely to take place, when the point of the child's shoulder is found behind the pubes.—*Dr. Kingsley's Ann. Rep. of the Roscrea Dispensary.*—The Doctor adds in a MS. note, "Upon visiting the case of arm presentation, I found the left shoulder, arm, and hand, protruded from the genital fissure; the child's body was soon after expelled by the labour pains (which were very violent), the parts advancing in the following succession, viz., left side of thorax, abdomen, thigh, leg, and foot; the breech did not come away doubled up, as in a breech presentation: while this process was going on, neither the shoulder nor arm receded; on the contrary, the concavity formed between the child's neck and shoulder turned forwards over the arch of the pubes and mons veneris."

EFFECT OF IMAGINATION.—The following case, in illustration of the operation of mental causes on the bodily frame, is related by Dr. J. C. Warren, the professor of anatomy and surgery in Harward University, Boston, in a lecture on the Importance of Physical Education, a copy of which we have lately received. "A short time since a female presented herself to me with a tumour, or swelling of the submaxillary gland of the neck, which had become what is commonly called a wen. It was about the size of an egg, had lasted two years, and was so very hard, that I considered any attempt to dissipate it by medicine to be vain, and advised its removal by an operation. To this the patient could not bring her mind; therefore, to satisfy her wish, I directed some applications of considerable activity to be made to the part, and these she pursued a number of weeks without any change. After this, she called on me, and with some hesitation, begged to know whether an application recommended to her would in my opinion be safe. This consisted in applying the hand of a dead man three times to the diseased part. One of her neighbours now lay dead, and she had an opportunity of trying the experiment, if thought not dangerous. At first I was disposed to divert her from it; but, recollecting the power of imagination, I gravely assured her she might make the trial without apprehension of serious consequences. A while after, she presented herself once more, and, with a smiling countenance, informed me she had used this remedy and no other since I saw her; and, on examining for the tumour I found it had actually disappeared."

THE LATE PROFESSOR BENNETT.

The Editor of this Journal attended Mr. Bennett during his last and fatal illness, as well as in many preceding attacks of the disease, which ultimately terminated this rising young anatomist's existence. There is little doubt that Mr. Bennett laid the foundation of his ill health in the dissecting-rooms of Paris, where he laboured to improve himself and others with more zeal than discretion. The consequence was, a very disordered condition of function in all the great abdominal viscera—more especially of the stomach, liver, intestines, and kidneys. The biliary secretion was always going wrong, and presenting unequivocal signs of vitiation. The intestinal secretions and excretions were also particularly deranged, both in colour, smell, and all physical properties. A remarkable symptom, in this respect, was the frequent evacuation of whitish and sometimes fatty or gelatinous fæces, which emitted a strong ammoniacal odour, and were attended with great irritation, both of mind and body. These were the ordinary symptoms; but, in the course of the last eighteen months of his life, he had several attacks of an alarming nature, amounting, upon two occasions at least to ileus. Obstruction in the bowels, resistance to every kind of aperient, vomiting, distension of the abdomen, pain and tenderness there, ejection of fæcal matters by the mouth, hiccup, facies hippocratica, and small quick pulse, have more than once continued for some days in succession, and rendered his case almost hopeless. Nothing but calomel and opium, with large and reiterated injections of soap and water, saved him upon these occasions. But Mr. Bennett had insuperable objections, or rather antipathies to some medicines, especially opium, and often allowed his disease to get to a great height before he would submit to the directions of his medical advisers. In the intervals between these attacks, and during the existence of the ordinary symptoms of derangement of the abdominal functions before alluded to, Mr. Bennett was extremely imprudent in his diet, drink, and general regimen. He was perpetually changing his plans, and taking all kinds of medicines, except those that were proper for him. The most prudent thing which he did, during the summer of 1830, was to run away from London, and travel for his health. He came back at the commencement of the winter lectures considerably recruited in his bodily functions, but still evincing the germs of a serious disease in the intestinal canal. He resumed his duties as a teacher in the London University, and, being very imprudent in diet, soon relapsed into a very bad state of health. About a month or six weeks before his death, he had one of his usual attacks of ileus, and his medical attendants almost despaired of effecting a passage through his bowels. The obstruction, however, was at length conquered, but he never afterwards rallied. He was harassed with diarrhœa, and in the motions appeared purulent and other matters, indicating ulceration of some part of the intestinal canal. He daily emaciated—became affected with cough, ulcerated throat, œdema of the lower extremities, loss of voice, and died a mere skeleton! During the last fortnight of his illness, Drs. Chambers and Clark joined in consultation with Dr. Johnson, who attended him daily throughout the whole period of his distressing disease. Strange to say, this accomplished and zealous anatomist gave the most positive directions and injunctions that no examination of his body should take place after his decease! These injunctions were obeyed, in order that the feelings of two amiable sisters, who nursed him on his bed of sickness and death, might be spared.—*Med. Chir. Rev.*

PROVINCIAL MEDICAL SCHOOLS.

The medical schools in France, at Strasburg, Lyons, Montpellier, and Paris, have, under the protection of the government, arrived at distinguished celebrity, and are visited by students of every nation. The hospitals, museums, and libraries, ARE FREE TO AN UNLIMITED NUMBER OF PUPILS; the hospital visit is made each morning by the physician and surgeon, at six o'clock in the summer, and at eight o'clock in the winter, and after the visit an hour is devoted to explaining the different cases, and modes of treatment adopted. The purposes of clinical instruction do not interfere with the attention due to the sick and suffering, whilst they serve as an additional stimulus to the exertions of their medical and surgical attendants. Under the usual and proper regulations, experience has fully proved that *no inconvenience arises from the admission of pupils into the wards.* In Germany, institutions conducted on the same principles have given rank to Stockholm, Frankfort, Jena, Erlangen, Tubingen, Bamberg, Leipsic, and Goettingen; and within the last twenty years, universities on a similar plan have been established at Landshut, Bonn, and Berlin, and accommodate nearly two thousand five hundred students. In Italy medicine is taught with the same success at Genoa, Turin, Pisa, Sienna, Bologna, Milan, Pavia, Florence, and Rome. America has followed the noble impulse given by Europe, and justly prides herself upon her schools of medicine. *In this country alone* has this

most important branch of education, *in the provinces*, remained almost stationary. The spirit of the times is extending to all large towns; schools for the cultivation of medical knowledge have been formed at Leeds, Sheffield, Manchester, Bristol, and Liverpool; and the governors of the different charities have rendered their institutions conducive to the best purposes of instruction. At the infirmary at Liverpool there are three classes of pupils: first, house-pupils, who are apprenticed to the house-surgeon, and whose *fees* belong to the *funds* of the hospital; secondly, out-pupils, who are admitted both to the medical and surgical practice for a period of not less than one year, upon paying a fee of twenty guineas, which belongs to the medical officers in common; thirdly, the medical officers have the *unlimited privilege* of introducing their own pupils, who attend exclusively to their individual patients. The whole body of pupils witness the entire practice of the house, medical and surgical, and any clinical lectures which may be given are open to them. At the Manchester Royal Infirmary, which contains 185 beds, the medical and surgical pupils *are not limited*; at the present time there are twenty-six pupils attending the surgical practice. At Birmingham, the opportunities for prosecuting the study of medicine are great, but they are limited to a very few students. It possesses an hospital containing 180 beds, a dispensary averaging 3500 cases, a fever hospital, a town infirmary with 16,000 patients, an eye infirmary with nearly 1500, and a school of medicine in which complete courses of professional instruction have been offered to the medical student. Dr. Edward Johnstone prophesies, that "Birmingham will become the seat of a grand scientific and commercial college."—*Remarks on the Promotion of Medical Education in Birmingham.*

WESTMINSTER HOSPITAL.

CASE OF ENGLISH CHOLERA.

To the Editor of THE LANCET.

SIR,—A case of English cholera having fallen under my care in the Westminster Hospital, more severe than is usual at this season of the year, I feel myself called upon to send a report of it to the editors of the medical journals, because the result is, I conceive, calculated to allay the apprehensions of the public mind. The characteristics of this man's case were—a degree of prostration of strength soon after his admission, from which there appeared to be little hope of his rallying, the nature of the fluid ejected from the stomach and bowels, the violence of the spasms, and the large quantity of laudanum and ether which he took, without any excitement or stupefaction having been induced by them. He was placed in a ward amongst other patients, none of whom were acquainted with the nature of his complaint, but the disease has not been communicated. It appears to resemble the cholera described by Dr. Sydenham as having raged in England in 1669. The prevalence of a disordered state of the stomach and bowels at this time, affords some grounds for apprehension that there may be something in the air which is favourable to the production of cholera. I have the honour to be, Sir,

Your obedient servant,

G. HAMILTON ROE.

6, Hanover Square, July 13, 1831.

CASE.

July 6th, 1831.—Patrick Geary, æt. 50, residing in Castle Lane, Westminster, has supported himself during the last two months as a labourer, but for the four preceding years was employed as a worsted weaver in Leeds. The scantiness of his earnings since he came to London, has obliged him to live on bread and tea, with an occasional meal of herrings and potatoes. Yesterday morning he was perfectly well, but whilst at work he felt swoln about the navel, yet suffered no pain. On his return home his thirst became very great; he drank a pint of table beer, which increased the uneasy sensations in his bowels, and he was almost immediately afterwards purged very frequently. He slept from eleven till between two and three o'clock, when he was seized with such violent cramps of the feet, legs, thighs, hands, and arms, that he was unable to rise from his bed to relieve the calls of nature. About the same time he began to vomit a fluid, which he says was bitter and sour; he was again violently purged, and felt slight tenderness and pain of the abdomen. He continued in this state, with occasional intermissions of his symptoms up to this time. He has not been drinking spirits nor eating fruit, nor has he had any illness during the last fifteen years. He was seen by a medical practitioner, by whom he was sent into the hospital. The name of this gentleman is not known.

Eleven A.M. His countenance is anxious, and indicates great prostration of strength. Skin cold and clammy; pulse 140, scarcely perceptible; respiration hurried; great thirst; some delirium; the slightest movement of the lower extremities occasions cramps.

A draught, with thirty minims of *laudanum*, and one drachm of *ether*, was given by Mr. Walsh; it was rejected immediately, a second was given, which remained in the stomach. Between one and two o'clock P.M. I saw him for the first time; his countenance was depressed and anxious; eyes suffused, but not sunk; surface of the body and tongue cold; extremities bathed with cold perspiration; pulse scarcely to be felt; respiration hurried; complains of a sense of scalding in the epigastrium, but has no pain, and very slight tenderness of the abdomen. When a spasm comes on, he writhes about the bed. Tongue furred; his bowels have not been moved since his admission. He has the appearance of a man in the last stage of inflammation of the bowels.

This man's danger manifestly arose from the impression made upon the nervous system, which was indicated by the expression of his countenance, the feebleness of his pulse, and the coldness of his skin. The object, therefore, was to counteract that impression, and for this purpose he was ordered a warm-bath immediately, with warm mucilaginous drinks, and a draught containing a drachm of *ether* and a drachm of *laudanum*, every hour, or oftener, if he seemed to require it, till the pulse rallied.

Cloths, wetted with *chloruret of lime*, were directed to be hung around his bed.

Seven P.M. Skin becomes warm after the bath, and he perspired freely; no drowsiness produced by the medicine; has vomited twice since the last report; the fluid ejected was like mutton-broth, with dark-coloured mucus in it. Countenance less anxious; complains of pain in the head, which is, however, quite cool to the touch. Cramp still continues, but not so violent; pulse 100, feeble; tongue not so dry; thirst less: skin cool. Appears to require a stronger stimulus.

℞ *Tinct. opii*, ʒ iss;
Spt. ammon. arom., ʒj;
Aquæ, ʒj. Ft. haust. omni horâ sumend.

Ten P.M. No vomiting since the last report; cramp less violent; countenance less anxious; bowels not purged; skin warm; pulse 100, with more strength; no pain except in the head.

℞ *Tinct. opii*, ʒ viii;
Spt. ammon. arom., ʒ viii;
Aquæ, ʒ viii. M. ʒj secundâ quaquâ horâ sumend.

July 7, six A.M. Slept soundly at times during the night, but the vomiting recurs every four or five hours. Cramps have been more frequent, but not so violent; occasional hiccough; bowels not yet purged: no tenderness of abdomen; tongue more furred; more thirst; countenance improved; respirations hurried; pulse 108, with more strength. The two last doses were rejected.

Rep. haust. c. spt. ether nitrosi.

Four P.M. At one o'clock the medicine was intermitted, because the skin was warm; the pulse was beginning to be sharp; tongue more furred. At three a purgative injection was administered; his bowels have not acted; eyes much suffused, countenance less anxious; no vomiting since last report; respiration natural; occasional hiccough; pulse 110, rather sharp; tongue more furred, and skin hot.

℞ *Acid hydrocyanic*, ℳj;
Magnes. sulph., ʒj;
Aquæ, ʒj. ft. haust. stat. sumend.

This was directed to be repeated every four hours till the bowels were open.

Six P.M. The pulse became so extremely feeble after the draught, that it was omitted; thirst not so great; hiccough increased; tongue still furred; bowels have not acted; no vomiting; no urine passed. Ten ounces of high-coloured urine drawn off by the catheter.

Nine P.M. Pulse fuller, 106; no vomiting; hiccough very troublesome; bowels not moved; skin warm and moist.

℞ *Sodæ tart.*, ʒij;
Magn. sulph., ʒj;
Aquæ, ʒviii. M.

July 8. Eight A.M. The hiccough was relieved immediately by the medicine; bowels not open, but there is tenderness of the abdomen; tongue cleaner; pulse 100, not so full; respirations natural; has had cramp once in the thigh; thirst continues; slept pretty well.

℞ *Ol. ricini, ol. terebinth*, aa. ʒss;
Decoct. avenæ, ℔j. ft. enema statim injiciendum.

One P.M. Bowels moved copiously half an hour ago; evacuation grey or whey-coloured, mixed with injection; pulse 100, soft; tongue cleaner; thirst continues; urine passed freely; since that time he has improved in every respect; pulse 76, soft; skin cool. On the 10th his bowels were opened three times, and bile appeared in the evacuations. He has improved gradually since in every respect, and is now convalescent.

The poor man is indebted for his recovery to the skill and attention of Mr. Walsh, the physicians' clinical assistant, whose talents and habits of observation cannot fail to make him an ornament to his profession.

Correspondents in our next.